

INDUSTRY AND FINANCE

WAR EXPEDIENTS AND
RECONSTRUCTION

EDITED BY

A. W. KIRKALDY, M.A., B.Litt., M.Com.

PUBLISHED BY AUTHORITY OF THE
COUNCIL OF THE BRITISH ASSOCIATION

4/6 NET

391

INDUSTRY AND FINANCE

WAR EXPEDIENTS AND RECONSTRUCTION

BEING THE RESULTS OF ENQUIRIES ARRANGED
BY THE SECTION OF ECONOMIC SCIENCE AND
STATISTICS OF THE BRITISH ASSOCIATION,
DURING THE YEARS 1916 AND 1917

EDITED BY
ADAM W. KIRKALDY, M.A.

B.LITT., OXFORD ; M.COM., BIRMINGHAM ;
PROFESSOR OF FINANCE IN THE UNIVERSITY OF BIRMINGHAM

Published by Authority of the Council

146283
—
181618

LONDON
SIR ISAAC PITMAN & SONS, LTD., 1 AMEN CORNER, E.C.
BATH, NEW YORK AND MELBOURNE



PRINTED BY SIR ISAAC PITMAN
& SONS, LTD., LONDON, BATH,
NEW YORK AND MELBOURNE

PREFACE

FOR a third year in succession, organised co-operative effort has resulted in the production of a volume which should be found of intense interest and prove of considerable value to those who are either studying the economic effects of the war or are in the responsible position of having to guide the nation through a period full of intricate problems and great danger.

One part of the investigations undertaken by the British Association has this year been marking time. The Government, impelled by a condition of affairs in the industrial world which might have developed in a manner dangerous to our prosecution of the war, set up a Commission to enquire into industrial unrest. It was therefore decided not to publish any detailed report on the subject in this volume. But we have been fortunate in persuading Mr. C. G. Renold, of Manchester, to write a section on his plans for creating Shop Committees in his own works. This part of the book will, one believes, prove by no means the least interesting amongst material teeming with interest. Special thanks are due to Mr. Renold—a very busy man—for finding time to set down his thoughts and experiences on paper, and for allowing their publication here. The chapter¹ on Industrial Unrest in our last year's volume should be read in conjunction with Mr. Renold's section in this book.

It is very gratifying to find that serious efforts are being made in several directions to prevent industrial friction on a large scale breaking out when peace dawns, and that these efforts follow closely on the recommendations made in the previous volumes issued by the Section of Economic Science of the British Association. The practical nature of these recommendations has appealed strongly to labour, capital, and the official world alike. It is to be hoped sincerely that the result of these efforts may be to place our industrial interests on the solid foundation of harmonious co-operation, employers and employees both realising that their real interests are bound up in common well-being. Well-paid,

¹ *Labour, Finance, and the War*, Chapter II (pp. 20–37).

satisfied labour alone can give that maximum of production which is more than ever necessary under present circumstances, and will continue to be so for many years to come. High wages, satisfactory profits, fair prices, and an adequate working day for all, will never be possible where friction, discontent, and restricted production are practised. But all these should be possible if good will and understanding subsist between employers and employed.

The chapter on "The Replacement of Men by Women" contains much that is worthy of careful thought. The local reports and appendices contain the detailed information bearing out the conclusions which the Committee has drawn up. Special gratitude is due to Professor Kydd, who devoted his furlough from India to the work of drafting this report. He spent many long weeks indefatigably working at the investigations sent to him by those whose names he mentions at the commencement of his work.

We have been fortunate, too, in obtaining substantial help from a leading member of another Section of the Association. Miss E. N. Thomas, D.Sc., Secretary of Section K (Botany), has written on "Women in Agriculture" from intimate knowledge of the facts. For she has been throughout the movement, and still is, an enthusiastic worker and organiser of the training and placing of women on the land. It is very gratifying that the two Sections have been able to co-operate in this way, and it is possible that in the future this working together may continue with equally happy results. Our grateful thanks are due to Dr. Thomas.

As Editor, I must specially thank my colleagues for the way in which they have lightened my labours. For three years now, Professor W. R. Scott, as Chairman of the Replacement and Currency Committees, has borne the heat and burden of the day. Happy, indeed, is the Editor who has Professor Scott's work to edit. Mr. J. E. Allen (the Secretary of the Currency Committee) and Mr. A. H. Gibson have worked hard, and have not spared themselves in making many difficult problems plain.

The investigations into "The Replacement of Men by Women" were carried out by local committees, mainly in Glasgow, Newcastle, and Leeds this year. Messrs. J. E. and H. E. R. Highton, J. H. Halliday, Misses Ashley, Grier, and Stevenson did excellent work, providing or criticising the information that was handed on to Professor Kydd. I must also thank the numerous Labour

Leaders and Employers who have so willingly helped us with advice and information.


In conclusion, it may be said that our investigations warrant us in looking forward optimistically. The nation appears to be imbued with a new spirit, and nearly every department of the national life has been quickened to new efforts for the lasting good of all. The war has caused enormous loss. The sad, irreparable loss of young life is most to be deplored, but the lives laid down have not been given in vain if one reads aright the signs of the times. Large accumulations of material wealth, too, have been consumed. We shall emerge from the war a chastened and a poorer people. But war has revealed to us wealth in its true proportions. The community and the individual have truer notions of life and its meaning.

From the point of view of the section of the Association responsible for this book, it may be said that Economics has entered upon a new epoch. The importance of the subject has been brought home to every section of the community and, unless one is very greatly mistaken, it will never be possible again to describe the subject as the *dismal science*. A lead has been given to at least one great section of the nation, and it is a remarkable fact that this *lead* has not fallen upon deaf ears.

Our race and our Empire may regard the future with confidence: the great test has been applied, and has evoked a noble response.

A. W. KIRKALDY.

THE UNIVERSITY,
BIRMINGHAM.
1917.



Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

CONTENTS

CHAP.	PAGE
PREFACE	iii
I. A SURVEY AND A WARNING	1
II. REPLACEMENT OF MEN BY WOMEN DURING THE WAR :	
Introduction	24
General Report	24
(1) Dilution and the Replacement of Men by Women	25
(2) Statistical Results and Comparisons	29
(3) Industrial Processes upon which Women are Employed	34
(4) The Success of Women on Men's Work	41
(5) Timekeeping	44
(6) Sources of Female Labour	62
(7) Industrial Training	68
(8) Welfare Supervision and Welfare Work	72
(9) Wages of Women in Industry	76
(10) Trade Unions and the Employment of Women after the War	78
Detailed Reports on Trades	81
III. WOMEN WORKERS IN AGRICULTURE	146
IV. WORKSHOP COMMITTEES :	
Suggested Lines of Development	160
V. THE EFFECTS OF THE WAR ON CREDIT, CURRENCY, AND FINANCE :	
Section A. Introduction	187
I. Political Events	188
II. The Economic Problem of Supplies	190
III. Foreign Trade	199
IV. Commodity Prices	202
Section B. I. Currency	204
II. The Banking Position	207
(a) Bank of England	207
(b) Joint Stock Banks	215
i. Increase in Cash Reserves	215
ii. Increase in Deposits	226
iii. Influence of the War Loan	230
(c) Savings Bank	231
III. Mobilisation of Securities	234

CHAP.		PAGE
Section C.	I. Government Revenue and Expenditure	238
"	II. Votes of Credit	242
"	III. Treasury Bills	244
"	IV. Ways and Means Advances	248
"	V. War Expenditure Certificates	248
"	VI. Exchequer Bonds	249
"	VII. War-Savings Certificates	254
"	VIII. The Third War Loan	255
"	IX. British Loans raised in America	267
"	X. Government Borrowings and War Expenditure to date	273
"	XI. The National Debt	276
Section D.	I. The Foreign Exchanges	277
"	II. The Foreign Exchanges of Europe and the United States (<i>contributed by</i> <i>E. L. Franklin</i>)	280
"	III. Present and Future Effects of the War on the Exchanges (<i>contributed by</i> <i>W. F. Spalding</i>)	284
Section E.	The Trade Bank or Corporation	292
Section F.	I. National Expenditure and Taxation	304
"	II. The Need for Control of Public Expenditure.	314
"	III. Taxation and Borrowing	317
APPENDICES—		
	I. Diary of Events during the Third Year of War.	322
	II. Monetary Inflation	327
	III. War Finance: Some Suggestions as to Future Forms of Borrowing	333
	IV. The Revenue, 1917-18: Is it Adequate?	340
	V. Loans or Taxes?	348
	VI. Railway Fares.	357
VI.	TRANSPORTATION	363
	INDEX	369

INDUSTRY AND FINANCE

WAR EXPEDIENTS AND RECONSTRUCTION

CHAPTER I

A SURVEY AND A WARNING

BY SIR HUGH BELL, BART.

OWING to the war, the usual meeting of the British Association is not to be held this year. Thus, as President of the Section of Economic Science and Statistics, in place of the ordinary Presidential Address, I am writing the introductory chapter to the volume of reports prepared by committees of investigation, which have now been at work for the past three years. Inevitably, considerations connected with the war must be in the forefront of our thoughts, and it is not unnatural, in the first place, to give some attention to what Professor Scott in 1915 called the "Economics of War."

In the confusion which followed the outbreak of hostilities in 1914, the predominating problem was as to how the economic situation must be faced and how it would develop. Those who recall the total disorganisation of all business arrangements in the first week of August of that year, will feel surprise rather that the country settled down with such rapidity to the new conditions than that the month of August was passed in bewilderment as to what the future would bring forth. The extraordinarily firm basis of British credit stood the strain wonderfully well. The courage shown by those in charge enabled us to weather the first onset of the whirlwind of war with comparatively little damage; and, though many individuals suffered severely, the commercial and manufacturing interests stood the shock without serious injury. Within a surprisingly short time the nation accustomed itself to the new conditions, and turned to meet them with undaunted mind,

It is easy to criticise after the event, but it must be admitted that a little more foresight—above all, a firmer grip of the essential conditions which a state of war imposes—would have rendered the situation less dangerous than it is to-day, or than it may become in the not very distant future.

It is customary for us in these islands to depreciate some of our most valuable peculiarities. Dr. Scott referred to this characteristic from another standpoint when he said in his address in 1915—

We should not be misled by that common national trait which no foreigner ever completely understands—our own inveterate habit of praising the methods of our rivals as if they were unapproachable in their excellence. In the seventeenth century it was the Dutch who were said to be our commercial masters, and very similar things were written later about the French. . . . There is no reason to be perturbed by the commonplaces that are to be found in every newspaper concerning the triumphs of German organisation. . . . German organisation involves a mechanical rigidity, and its initiative is severely limited; ours is spontaneous and free.

These opinions, in which I entirely concur, may be further elaborated. We hear perpetually complaints of the English habit of "muddling through." The contemptuous expression blinds us to what is really the fact. Rightly appreciated, it is precisely this habit which enables us to meet and deal with the problems which arise. The rules of logic assume that all the facts being known, the conclusion to be drawn is a matter of mathematical certainty. But in the conduct of life we are never sure that we shall be in possession of all the facts. Some quite unexpected circumstance may—nay, almost certainly will—arise to upset all our calculations, and our syllogism is hopelessly at fault. The Kaiser is said to have declared not once, but many times before 1914, that within three weeks of the beginning of war his troops would enter Paris. The German General Staff had calculated to the very hour when their army would be in Paris. It is even averred that the festival dinner to celebrate the victory had been ordered. But events entirely falsified these anticipations, and after three years of strenuous endeavour the three weeks do not yet appear to have begun to run.

Unconsciously the illogical Briton has recognised the fact, and prefers to "muddle through," which, translated from the depreciatory language he uses of himself into the language of fact, may

be taken to mean that his alert and practical mind is trained by long experience to meet the emergent circumstance and deal with it when it arises.

There seems some risk lest he should be over-persuaded to abandon this most excellent quality and try to substitute for it the "mechanical rigidity" of which Dr. Scott speaks, which he will find embodied in a bureaucratic system quite foreign to his habits and methods. Let us not undervalue the advantages to be gained from organisation; but, on the other hand, do not let us overlook the remarkable adaptability which enabled us to turn our ploughshares into swords, and which will, when the time comes, permit us to reverse the process and turn our swords into ploughshares.

The question as to how it has been possible for us to bear with so comparatively little inconvenience the strain of three years of economic pressure is one of extraordinary and increasing interest; for, however much we may long for peace, we are fain to admit that it is impossible to say when it will come, and impossible to deny that unless it comes bringing with it the fulfilment of our reasonable desires, we would rather continue the struggle even though this should bring us greater suffering and privations than any we have yet known.

I venture to attempt a solution of the enigma. For the purpose of the argument, certain figures, which may not be quite accurate, must be assumed. The matter is one in which, at present at all events, complete accuracy is unattainable, but we may put the gross annual income of Great Britain prior to the war at £2,400,000,000. The present income is no doubt much larger; how much it is difficult to say. But the increase need not be considered, as it does not affect the argument. Subject to certain very important reservations which I will shortly explain, the whole of this sum is destroyed every year in maintaining the nation in precisely the position at the end of any given year as it was at the beginning. A settled people has grown no older in the year; the average age remains constant. If we were dealing with an individual, we should have to make reservations on this head. Dealing with the nation, this need not be done.

In the ordinary way we get, in return for this destruction, all the necessities and amenities of life to which before the war all

were accustomed. Rich and poor (if we must make this very rough and, in many respects, misleading classification) led before the war an easy spendthrift life. I do not hesitate to use the words—our thronged excursion trains carrying almost exclusively those whom under the classification adopted we must call poor; the picture-theatres in ever-increasing numbers; the public-houses filled with “thirsty” customers are testimony enough on the one hand; while ostentatious wealth as shown in motor-cars, in costly entertainments, and other like extravagances, show that the “idlerich” vied with the “idle poor” in squandering money. In these various ways all the income of the country, save the reservations I am about to make, was destroyed in maintaining us all in the way in which we had been accustomed.

Had all the income, to the last penny, gone in this way, it is clear there would have been no progress. Indeed, unless the population had remained stationary, there would have been retrogression. But we know the population increases. Roughly, 400,000 more people live on these islands at the end of each year than at the beginning. If we take the breadwinners at a fourth of the population, we shall not be far wrong in dealing with such figures as are now under consideration. I estimate that in the industries of coal and iron from £150 to £200 of capital is needed to set a man at work. On the railways of Great Britain well on to eight times as much is needed. In agriculture, if we take the capital value of the land as represented by the price at which it sells, perhaps about the same sum as the railways, or if we take only the stock required to work the land, about £300 to £400. On the whole, it would probably be within the mark if £50,000,000 were put as the amount of new capital needed each year to give employment to the natural growth of the population without doing anything towards raising the standard of life.

This first claim on any residue after we have destroyed all the income we need to live (as we have implicitly defined the word) must be met. For the sake of order and clearness, it must be stated, but we may merge it in the second and more important item.

It is not denied that a gradual improvement in the conditions of life has taken place. This need not be elaborated. It can be shown in many ways. This means, in part at least, that the community has saved money, has invested it, and out of the interest

on such investments has added to its power of spending. These savings are variously estimated by those who have studied the question. They vary from year to year, depending on circumstances of which some can be easily—some with more difficulty—recognised. If over time, we put them at £400,000,000 a year, we shall probably not be far out.

Next we have to consider and value another item which presents more difficulty. In the process of living, we destroy not only the evanescent wealth which we call income, such things as food and drink, and various other accessories which need not be further specified, but we use up by wear our more permanent possessions, which, though perdurable, are not everlasting. Our clothes wear out and need renewal, even if we do not regard them as obsolete at the call of fashion before they have become unserviceable as the result of use. Our houses need continual repair if they are to protect us from the weather. Almost everything we possess and use gradually ceases to serve the purpose for which it is intended.

Under normal conditions, we expend some part of our income in effecting these repairs. Most of them are not imperatively needed at any particular moment. Your clothes, though shabby, will last another year—or even two. The carriage is no longer smart enough for the Park, but it will serve to take you to the Station. The house needs re-painting, but it still stands the weather, and so you put off “till after the war” to paint inside, and only do outside work which cannot wait any longer without serious results—perhaps you run even that risk. And so on and so on indefinitely. These repairs and renewals can be postponed, and under compelling necessity must await a more convenient season. It is difficult to guess what this may amount to in money. The difficulty is enhanced because, on the whole, the repairs and renewals are almost always also in the nature of betterment. The new motor-car I shall buy will, in all likelihood, be better than the old one which I scrap. The engine which replaces the worn-out machine will be more economical, and will also be more costly. After giving the best consideration in my power, it seems to me that £400,000,000 is not an exorbitant figure to put for all these various items. It is only about 2 per cent. on the estimated capital value of the kingdom.

Now, since the war we have made no saving—except for the purposes of the war. Large sums have indeed been spent on erecting and improving factories of various kinds, but in the main these have been to provide warlike material. The works themselves may hereafter prove an asset, but this must be left out of view for the moment. We have not even maintained a great deal of our property in a condition of complete efficiency. For example, the railway companies have perforce been obliged to allow their lines and their rolling stock to deteriorate. A very great part of this £400,000,000 for maintenance, repairs, and renewals has not been spent, though it has been earned. If we add these together, we have £800,000,000 a year—over £2,000,000 a day—which we could devote to the war, and be, for the moment, no worse off. Ultimately we shall suffer, for the repairs which should have been effected in 1914–15 will cost far more in 1918–19 (if the war allows them to be done so soon) than they would have cost if done when due. “A stitch in time saves nine” may not be a statistically accurate statement of fact, but it is a good working generalisation.

But besides all this, which involves a very direct contribution to the cost of the war, what have we done since August, 1914? Very rapidly—but much more slowly than would have been the case had more foresight been exercised—all our energies were turned to producing articles needed for the war. What Dr. Scott said in 1915 is proved to be true after two years more knowledge gained—

The experience of the early months of the war has fully confirmed the anticipations of economic theory as to the power of the transference of specialised capital and labour from one process (for which the demand has temporarily declined) to another in which it has increased. It is not remarkable that cotton operatives should migrate to woollen mills to make khaki; but it might at first occasion surprise to hear that many makers of brass door handles soon were at work in helping to produce shrapnel shell—their contributions consisting of the brass-driving rings and copper bands. At the beginning of the winter, machines that formerly made spokes for cycle wheels produced knitting needles. Plant normally used to make gear cases turned out hollow-ware tins and basins for the troops. Pin-making factories found new employment in manufacturing military buttons. The list of war uses for plant during the first month of hostilities could be very greatly extended. . . .

But these same factories did not produce the various articles for

which they had been designed, and the inhabitants of this or some other country had to go without. In one word, all our energies, maintained by the consumption and destruction of the bulk of our income, have gone to the prosecution of the war, and not to the infinitely better purposes of peace to which they had been previously devoted.

Besides all these, there is yet one other source from which we have derived the means of carrying on the war. There has been a great increase in the actual energy developed by the inhabitants of the Empire. The men at the Front have worked harder than they would have believed it possible. Even the hours of idleness spent in awaiting the call to go "over the top" make, it may be supposed, no slight call on the endurance of our soldiers. If the same thing cannot be so confidently affirmed about the men at home, it is certain that the women have contributed immensely towards providing the means to continue the conflict.

These considerations seem to explain why the extraordinary expenditure of the past three years has been possible. They also show that it cannot be carried on indefinitely. The absence of all savings and of their investment in ways beneficial to the world means, at best, a pause to the progress of national improvement. The discontinuance of the repairs means a gradual deterioration of the capital of the world. The labour of the millions of men engaged directly in warlike operations at the Front, or indirectly in making these possible by preparations behind the actual fighting line, has been withdrawn from profitable and useful work. This is not compensated for by the employment of women at home in their stead. The withdrawal of multitudes of women from their proper function cannot fail, it may be feared, to be detrimental to the future well-being of the nation. Against all these drawbacks we have to set the somewhat doubtful asset of the improved equipment of the manufactories of the country, which we may hope to utilise in some profitable way when peace is restored.

The war is not over. Can we continue it for a much longer period? This is a question to which it is very difficult to give any precise answer. If the explanation is correct, we can no doubt cease all saving for some time to come, perhaps for several, or even many, years. We can also postpone repairs and renewals.

The capital fabric of the country will hold together for a long time. But it is to be feared that deterioration of a serious character, telling against the maintenance of efficient production, will show itself before long. There seems to be no doubt that much greater economy might be exercised by the inhabitants than has been the case up to now. It is open to question whether any real privation has yet been suffered by any large class of the population. Isolated cases may be cited, but on the whole there is ground for asserting that, certain inconveniences apart, the people of this country have been more prosperous in the last three years than almost ever before. It would seem, therefore, that for some considerable time we can continue to squander our means on warfare and not suffer any very great immediate inconvenience. There is, however, obviously a limit to this; and all lovers of their country must long for some assurance that the present troubled and perilous condition of the world will speedily come to an end.

It does not belong to my subject to dwell on the indirect benefits which we may hope the world will obtain as the result of a satisfactory peace. If the war has proved the futility of such proceedings for the attainment of their avowed object, it may be that all the blood and treasure poured out in rendering the fertile plains of Flanders a desert may not have been wasted.

As the Allies view the matter, Germany embarked on a policy of aggrandisement by plunder. Her governors, ruling an unfortunately docile people, were persuaded that wealth could be compassed by robbery. The place in the sun which the Kaiser claimed for his Empire was being rapidly got by his people, but it was not enough for him that this peaceful penetration should be slowly accomplished. A happy and prosperous world in which the German people enjoyed no small share of the good things brought by prosperity was of little value to the megalomania of the Kaiser and those about him, if her black, yellow, and red flag did not wave over a larger surface of the globe. The rest of the world might have viewed this ambition with less alarm if decent conditions of civil liberty had been compatible with it. But a State of which the motto might suitably be "*Polizeilich verboten*" did not commend itself to the free peoples of Europe and the world. The military organisation of the German Empire was essentially distasteful to such peoples. If the war, as we hope, leads to the

establishment of peace on a permanent basis, it will have demonstrated two things:—First, the indestructible love of freedom on the part of a great majority of mankind, who will rather give up life and property than the hope of liberty; and, second, the impossibility of enslaving men by the pouring out of blood and treasure even in the extravagant manner practised during the last three years.

So far, it has been my endeavour to show how it has been possible for this country to meet the demands on our resources imposed by the war. Whether the explanation be right or wrong, there can be no doubt that the economic situation at the end of the war will present problems full of difficulty, and not without serious menace. It is to the consideration of these that I now turn.

It must be premised that the war is not alone responsible for the problems with which we shall have to deal. Before the outbreak, there were already signs of approaching trouble. Grave dissatisfaction with the conditions which prevailed had shown itself in several serious strikes. This dissatisfaction was not confined to Great Britain, but existed, in more or less marked fashion, in other countries. The war has postponed, though it has by no means solved, the problems which craved solution in the years preceding the outbreak.

After the first moment of confusion, the people of this country bent their energies to cope with the situation which came to most of them as an immense surprise. It is true that many of the devices adopted to meet the emergency were of doubtful value; it is not improbable that promises rashly made by those in power will prove very difficult of fulfilment. If this proves to be the case, it will greatly add to the difficulties which we shall encounter.

At the root of all the trouble lie two unsolved problems. The first deals with the general question as to the nature of trade; the second, with the division of the products of industry.

With the first of these it is not proposed to deal at any length, though on the correct understanding of it depends, in my judgment, the future peace and prosperity of the world. The so-called evils of competition are, in fact, the method by which the progress of the world has been secured by directing men, often quite without their conscious co-operation, into the course which would best satisfy their ever-growing wants; and this tends to make them use their energies, whether they be intellectual or physical,

so as to produce the best results. Those people who are most easily able to turn these energies to the attainment of new objects will come off best in the race. But all must obtain satisfaction of their wants or cease to take part in the process—an alternative which they will not readily accept, and with which they need not be confronted. For it is the interest of all that each should have his needs supplied in return for his co-operation in supplying the needs of his neighbour. This sentence appears to me to contain the crux of the problem, and to indicate the cause of a great part of the unrest, both as regards internal and external trade.

The conflicts which arise are due to an entirely false but not unnatural view as to the nature of commerce. The terms we currently use are largely responsible for this fatal and pernicious error. "Give a dog a bad name and hang him" is a proverb which illustrates this phase of human thought. All our terminology of trade has connotations of conflict. With difficulty have I avoided in the foregoing exposition words which imply hostility: words like "struggle"; implications that there is a prize to be won; suggestions that in a commercial transaction one side must get the better of the other. These words and phrases all indicate that attitude of hostility which is, I believe, false and essentially misleading. The best bargains men make are not those in which one gets the better of the other, but rather those from which each draws an advantage making him wish to repeat the process, and so maintain the flood of mutual benefits set running by the first transaction.

It is equally true of trade between nations as between individuals. Indeed, it is another cause obscuring the issue that we talk of international trade. It is convenient to look at the whole trade operations between the inhabitants of one country and those of another; but, in fact, the operations themselves are between individuals, and it is merely an accident that the buyer happens to be an Englishman and the seller a Frenchman, an Italian, or even a German. If the parties, be they fellow-countrymen or be they foreigners, are wise, they will desire that each may profit, and so return to trade. The last thing they should wish is to ruin their customer and lose his custom. In one word, Commerce is not conflict, but co-operation. The right apprehension of this truth would have dissipated many of the fears which people entertained

before the war as to the danger in which the world stood from German commercial activity and enterprise; it will lessen the alarm with which they regard the prospect of the German people after the war returning to the arts of peace.

To most of us engaged in industry, nothing is more to be desired than prosperity for our neighbours, whether we love them or hate them. Prosperity means the power to satisfy wants and the wish, explicit or implicit, to exchange a surplus with someone else for something desired, and this state of mind will not be satisfied by one transaction, but will grow by what it feeds on. No people were more to blame for the erroneous view of the nature of trade which I am seeking to expose, than the Germans. The war is largely the result of this mistake. Is it too sanguine to hope that the logically-minded Teuton will see that expenditure of thousands of millions of money by himself and like sums by his opponents; the loss on both sides of the lives of millions of men who had desires to satisfy, and were ready to do what they could to satisfy those desires, even though they thereby satisfied similar desires of other men, have not contributed to gratifying his wishes? Rather has all this destruction postponed indefinitely the golden age to which men look forward.

The second problem is a corollary of the first, but it touches us more closely, and lies more easily within our power to solve. The whole energies of the nation are directed to attaining the means of carrying on, with the largest amount of enjoyment possible, the existence of the individuals comprising it. We measure this most easily in terms of money; but this is only a rough-and-ready method, for many of our acutest pleasures and our highest gratifications are not to be stated in terms of pounds, shillings, and pence.

These energies are of the most varied kind. The King on his throne; the archbishop in his pulpit; the statesman or legislator in council; the lawyer in the court of justice; the author at his desk; the "man of independent means" enjoying the fruits of his own or his predecessor's industry; the surgeon at his operating table; the merchant in his counting-house; the manufacturer in his factory; the miner in the mine; the ploughman at his plough; the labourer at his job—all co-operate in providing, in one form or another, that sum of results for which we find a measure in the gross income of the country.

There are those who would exclude certain of the classes which at present constitute the nation, and which I have very summarily typified in the list just given. It may be that some of these classes are not indispensable. They may be redundant or even harmful, but in some form all of them have existed since the dawn of history. It is possible that, however unnecessary they may appear, they cannot be excised from the body politic without producing serious results. We know that in the body physiologic this is the case, and it may also be true in the body politic. It seems prudent to suggest that till some obsolete organ in the one or the other is known to be actually harmful, it is wiser to let it alone.

The question we are called on to solve is how should this total product be apportioned among those who contribute to its being obtained. We must, in the first place, divide the total into certain sections. It will probably be admitted that the product of industry in making, say, cotton goods, cannot be used directly to pay for producing, say, iron or leather. If one industry is to contribute in this way to pay for another, it must be indirectly and not directly. For example, the cotton trade helps the iron trade and the coal trade by buying the machinery of the one and the coal of the other to actuate the weaving and other machines. But a further admission may be made. The successful author, who sells his book to employer and employed indifferently, can hardly be called on to make a direct contribution to the remuneration of the one or the other. The same is true of the lawyer or the surgeon, and of the actor or the painter.

May we not admit, without further parley, that the sale price of the commodity must alone be the source from which all engaged in its production shall draw their remuneration? To ask for help from any other source is to invite someone who has no direct concern in the matter to bear more than his share of the cost. The present tendency to have recourse to some other source appears a very dangerous one, which may lead to serious inconvenience by disguising from us the real cost of the article made the subject of such extraneous help.

A common suggestion is that the State should be called on to intervene in the manner indicated. But the State possesses no fund but that which has been drawn from the taxpayer. If the tax fell on each contributor in exact proportion to his interest in

the subventionised calling, less harm might ensue. There are some exceptional cases where this may happen, but they lie outside our present survey. With these exceptions, to give out of the State funds help to any industry is a case of robbing Peter to pay Paul.

We fall back on the proposition that the commodity must provide the whole cost of its production. This is usually accepted without much demur by those who discuss such questions. If it be granted, we must consider in what way the division now takes place, and how it can be mended so as to give a more equitable share to those concerned, if it is found that this end is not already accomplished.

It has been frequently pointed out that the cost of production of any article of commerce and of most services consists chiefly of labour. That, of course, means that any large increase in the part taken by labour is impossible. Let it be admitted that, say, 75 per cent. of the selling price of any article goes to those engaged in manual labour in producing it, and it is obvious that so relatively small an increase as 10 per cent. in the labour bill will absorb over 25 per cent. of the remainder. A very large part of that remainder can be shown to be beyond the control of those directing the operations. If (as is the case in some industries with which I am acquainted) as much as two-thirds fall into this class, there remains under 10 per cent. of the total in any way available to give the additional remuneration claimed. If we put the claim of labour at 10 per cent., less than 3 per cent. would remain to meet all the claims incumbent on the proprietors, which must be met if they are to continue to perform the work they are doing for the community. Any live and progressive industry must find not only enough to remunerate those engaged in it, but must provide for its growth and improvement, otherwise it must either stagnate or draw capital from some other source. This it can only do if it is yielding an adequate return and so attracting capital from without.

Great complaints are made that those engaged in industry in Great Britain have in recent years been wanting in enterprise. As in so many other cases, the complaints are self-contradictory. On the one hand, it is said that the manufacturer's profits are inordinate, and should be reduced by paying larger wages to the

workmen he engages. On the other hand, the employer is told that he ought to put more money into his business. This can only mean that his capital per unit of production ought to be larger. But if it were larger, he would need a larger and not a smaller share of the total product to reward him for his larger capital.

A striking illustration of this can be drawn from the railways of the country. The whole railway enterprise might be taken to show what is meant. I will rather confine myself to one great and prosperous railway with which I am well acquainted. The North-Eastern Railway has a total capital of about £82,000,000. Of this, £24,250,000 are in debenture stock, and form a first claim on the income and the capital of the undertaking. About £25,750,000 of guaranteed and preference stock of various sorts follow with a second claim on income and capital. And there remain £32,000,000 of ordinary stock. All these serve to earn gross receipts amounting to £12,500,000; and, after meeting all the charges on it, there remain for the proprietors £4,250,000. The £8,250,000 of outgoings consist as regards fully one-half, in wages paid to the persons in the direct service of the Company. It would be very surprising to those best acquainted with the matter if half the remainder were not paid away indirectly in wages. Be this as it may, it is obvious that any considerable increase in the direct wages would tell very seriously on the sum from which the dividend must be taken. But the debenture stock has a first claim of about £850,000. The guaranteed and preference stocks take just over £1,000,000. Less than £2,500,000 remain to provide a dividend on the ordinary shares and to meet certain other claims which in recent years have been more and more recognised, and have required ever larger amounts to satisfy them. Six per cent. on the £32,000,000 of ordinary stock needs about £2,000,000, and leaves very little to meet all the claims to which allusion has been made. Is it not clear that no substantial advance of wages can be given without trenching on a fund from which the growth of the railway must come? It is no use to urge that this fund ought to be in other hands. The contention of those who ask for more wages is that the standard of life must be raised. But surely that means that more of the income of the country must be destroyed in mere working and maintenance in contradistinction to extension and improvement.

In what way, then, are we to obtain for the mass of the people that amendment of the standard of life for which they clamour with ever-increasing insistence? The answer of the future is the same as that which was given in the past. The total productivity of the people must be increased. Strikes and restrictions only exacerbate the evils they are meant to remove.

We come, thus, to the heart of the matter. To have more, we must produce more. No employer objects to high wages if he gets an adequate return. In the ideal commercial community the cost of production, not the amount of wages earned by any man or group of men, would pre-occupy the employer. He would ask one thing only—that the man, during his hours of work, would earnestly strive to produce the largest amount possible. Controversies as to the hours of work would cease. We should have determined the time within which a worker can put forth his best effort and at the end of the week be as good a man as at the beginning—except that he was a week older. It may be that the day of eight hours to which we have now practically come—mostly by healthy agreement, sometimes by legislation—is too long, and that some shorter number of hours is enough for a man to work strenuously and produce over time his maximum of output. It lies with those most directly concerned to settle this question. It can hardly be accomplished by legislation, which cannot deal with the great variety of circumstances to be taken into account in different trades. No pretence is made that the problems are easy. All that is urged is that the solution must come from within and not from without. To divert taxation from its proper and only legitimate purpose, and to let it supplement the deficiencies of industry, appears to me a most dangerous course to pursue. I view with grave apprehension all schemes of the kind. To provide for the housing of the people engaged in some industry out of the pockets of those engaged in some other is an example of what, I fear, may take place, for that is what it comes to if the State is to subventionise the building of cottages.

The number of houses required every year to house the growing population is hardly appreciated. It comes as a surprise to most people to be told that about 80,000 houses competent to give shelter to five persons each are needed annually. From various reasons—some of which I will assign—this number has not been

reached in recent years. The building trade, from its peculiar organisation, has forced up the cost of houses. It may be doubted whether any operatives do less for their wages than those engaged in building houses. The phenomenon is not difficult to explain; its existence is hard to deny. The Legislature has added to the trouble. All these causes existed and made themselves felt before the outbreak of war. To these must be added yet another, more praiseworthy in character, which has contributed to the dearth. A very great number of the older habitations of the country have, in these latter years, come to be regarded as no longer fit for human dwellings. Houses in which former generations lived and died will no longer serve for the more exacting people of to-day. The houses, when vacated, caused a demand for others, which, owing to the circumstances which have been mentioned, it was impossible to meet. A faulty system of local taxation still further complicated matters. It is safe to assert that to-day the country needs well on to half a million houses, though it may be an exaggeration to put the figure, as some do, at twice that amount.

It is now suggested that the State shall make good the deficiency by finding money to build houses for my ironworkers out of the pockets of persons who have no direct art or part in the iron trade. The injustice of this seems the greater when it is borne in mind that all the eight or nine millions (more or less) of houses in the country have been provided without any such assistance. The greater part of these fulfil, more or less completely, the exacting conditions which are now prescribed.

In passing, attention may be called to the large proportion the cost of houses bears to the capital by means of which the men inhabiting them are set to work. In a large colliery enterprise in which I am interested, which has a capital of just about £1,000,000, the owners have had to find as near as possible £500,000 to house their workpeople. That is to say, for each pound sterling invested in the colliery there are 10s. invested in a house. The figure, surprising as it is, is borne out by what we expect to be called upon to provide at certain important ironworks now in course of construction in the North Riding of Yorkshire.

The various references to the State funds and to taxation which have been made so far lead me to say something on the

matter, as it bears on the subject of my address. It is certain that very far-reaching measures of reform must be applied to our methods of taxation. The war has definitely proved one thing—that no reliance can be placed on import duties in case of war. Among the earliest measures adopted by foreign countries, abrogation of such duties took its place. As regards the chief of our enemies, this speedily became nugatory by the cessation of the bulk of the imports and by the urgent need of the country for those which it could get. If our command of the sea rendered us less sensitive to this pressure, other circumstances have made our Customs duties less fruitful of revenue than in times of peace. The source to which those in charge of our finances turned was the income tax in its various forms, greatly modified by the fact of the war. Considerable objection may be taken to many of these modifications, and the worst of them have been abandoned. Taxes which take confiscatory forms are to be deprecated. These not only have bad secondary effects of a very serious character, but they tend to demoralise the public mind and cause people to attach opprobrium to acts which, if not laudable, are at all events innocent and often useful. A very great deal of the condemnation conveyed in the most awkward neologism *Profiteering* is attributable to the growth of this demoralised public opinion.

But while recognising much that is unfortunate in recent taxation, we may congratulate our Chancellors of the Exchequer that they, to some extent, endeavoured to rise to the height of the occasion. The war Budgets have been attempts to meet the expenses of the war as far as possible out of the income of the country and to avoid the imposition of part, at least, of the inordinate cost of the struggle on those who come after us.

What that burden will be I cannot pause to estimate. Whatever it is, it must, in my judgment, be paid out of the income of the year. It is no mere academic refinement to say taxes can come from no other source. We hear people talk of taxing capital. I maintain you cannot tax capital. You may assess the amount you are going to claim on the capital value of the undertaking or of the property, but the tax must be levied out of the income of the man who pays it. The State or the Municipality does not want your house or my blast furnace. So many pounds are

needed; and if your house is empty or my blast furnace idle, they do not produce the income out of which to pay the pounds for which they are assessed. Without labouring the question, this can be shown to be true also of such taxes as death duties.

The net result of it all is that the taxes of the year must be paid out of the income of the year. Why not levy them direct and without circumlocution from that income? There are some taxes of such old standing to which people have become so accustomed that it would be wise to leave them largely unaltered. Taxes which do not fall on prime necessities of existence may well be allowed to stand. Tobacco and alcohol may continue to yield their quota to the revenue of the Kingdom. The consumption of tea (and incidentally of coffee) need not be encouraged. But sugar is of such great dietetic importance that one would gladly see its use unhampered by any tax. If this removed an obstacle to a beet sugar industry in this country, so much the better, though I would not draw a penny from the taxpayer to have all the sugar industry of the Continent. The Chancellor of the Exchequer ought, in imposing a tax, to have one object only in view—to get the last possible fraction of the impost into the Treasury and to put nothing into anybody else's pocket. Ethical considerations should be entirely foreign to his mind. It would not be difficult to show that the ethical considerations which have been allowed to weigh in the taxation of alcohol have produced most untoward results. A great part of the discussion about the use or abuse of barley would never have occurred if "The Trade" had not been affected by the question. A great and very powerful vested interest has been created, and, not for the first time, has had a sinister influence on politics. We should have probably done much better had we kept in mind the wise dictum of Lord Cromer—that sound finance is the only true foundation for sound policy.

Assuming, then, that our public revenue—both local and general—is founded on and comes from our income, let us see how we stood before the war, and how we shall stand when at last peace is proclaimed. If we put the pre-war Budget of the kingdom at £200,000,000 sterling, and the local budgets—after deducting revenue-producing assets like gas, water, etc.—at £80,000,000, we shall not be far from the truth. To raise this, an income tax of

2s. 2d. would be needed. As a matter of fact, some of us paid far more than 2s. 2d., and some far less. It is a subject of speculation how much the average wage-earner with an income of, say, 25s. a week, contributed to the taxes—local and general. There are those who say that if he drank and smoked in moderation only, his contribution was larger per pound of income than his wealthier neighbour. I incline to the belief that any burden will speedily find its economic level, and that any tax, however inequitable, will be speedily adjusted so as not to bear too heavily on the wrong shoulders. If some Chancellor of the Exchequer taxed shoemakers only, he would simply put up the price of shoes. It follows, therefore, that every pound of real income we possessed represented 17s. 10d. of money spendable as the owner pleased—the State and the Local Authority having taken 2s. 2d. for making it possible to live quiet and undisturbed lives where we pleased in Great Britain.

He would be a bold man who set the cost of the war in actual money spent by Great Britain at less than £5,000,000,000, and the interest on that debt, with some moderate allowance for redemption, may well amount to over 5 per cent. We are not likely to spend less at home than we did before the war. It may well be that the £70,000,000 or so which we spent on defence (about one-third of the total) will be exceeded. Education clamours for more money; sanitation is not silent; the claims made on behalf of the rising generation for the fostering care of the State indicate that little will be left to the parents, and filial affection will have to seek some other outlet besides giving help to the failing years of the parents, who will have deserved little gratitude, since the State will have assumed most of the functions of parenthood. It cannot be doubted that those injured more or less severely in body or mind by the war will be helped by the State, nor that the dependents of those whose lives have been sacrificed by the inhuman cruelty of man to man will be a proper charge on our public revenue. All these various points lead to the conclusion that a revenue of £600,000,000 may be needed to meet the calls of State and Municipality after the war. The 2s. 2d. will have become 5s. and, out of the pound coming in some form to the citizen, only 15s. will be his after he has paid for the right to claim the benefits of citizenship.

There is only one honest way in which this heavy burden can be alleviated. If we can raise the income of the country above the £2,400,000,000 I have assumed, we shall lighten the weight of taxation. There is good reason to believe this may be the case. The productivity of the nation has proved immensely greater than was anticipated. We have found that men, and still more, women, could do more than we thought possible. If the burden is to be eased in this way, many of us are convinced that it will be better accomplished if those concerned are left to themselves, unhampered as much as may be by the intervention of the State. Grave, almost insurmountable, difficulties confront a State Department called upon to handle and to adjust the exceedingly complex interlocked problems presented by the organisation of our great national industries.

Suppose we assume that three-fourths of the income of the country arises from sources which can be increased, we have about £1,800,000,000. If we could raise this by 20 per cent.—not, I think, an impossible supposition—we should have £360,000,000 more income, and this would meet our extra taxation and leave something to spare.

I will not here attempt a detailed programme of taxation based chiefly on an income tax; but, speaking generally, we may divide the total income of the country into two approximately equal parts. One half goes to remunerate labour and to provide the income of those below what we called income tax level before the war. Suppose a graduated tax based on wages, and collected by stamps running from 2s. to 4s. on such incomes as are paid weekly or monthly, and a like tax based on returns. Suppose a more sharply graduated tax on incomes over that level, rising even to 8s. or 10s., and you have your revenue of £600,000,000; or, say, of £500,000,000 after Excise and Customs and certain other sources of revenue have been deducted. No pretence is made that such a revolution will be easily accomplished. But no way of raising the immense revenue required will be palatable, and this method has the merit of bringing home to each one of us directly and visibly what the war has cost us.

Before concluding this chapter, I must not omit to refer to the change in the title of the Section. We have, with the consent of the Council of the Association, added the study of transportation

to the subjects with which Section F deals. At a time when all questions of national economy are of such great moment, it is only fitting that the British Association for the Advancement of Science should devote time to the study of this important subject. It has been much neglected in the past, though one of my predecessors in this chair has devoted a volume to the subject. It presents problems which are of great and immediate interest. We lack precise information on many vital points. If we had it and it were made available to the public by discussion at such meetings as those of this Association, many demands which are now made would be at once seen to be impossible, and not a few of them self-contradictory. I have already dealt with some of these. Here is another example of the kind of thing which is thought possible. Under the present system of railway management by the Government through the Executive Committee, various advances of wages in the way of war bonuses have been given to the railway servants. These amount to about 15s. a man, or, say, £40 a year. It was stated in a newspaper circulating in the North of England that this amount was to be added to wages, and would not be subject to reduction after the war. If this were done, it would wipe out the whole amount now available for dividend on the ordinary shares of the North-Eastern Railway. What prospect would there be of that great undertaking continuing to serve the important industrial district through which it runs? Proposals of the most contradictory kind are now made. More wages and shorter hours are asked by the men employed on the railways, while better service and quicker despatch are demanded by the public who use them. At the same time, the companies are forbidden to increase the charges for the carriage of goods and passengers. The improvement of existing canals and the construction of more are suggested. The competition brought about by this expenditure is to be the means of compelling the railways to afford facilities not now forthcoming. All these are subjects which the new sub-section of Section F will study.

In intimate relation to these problems stands the more general question of the way in which the railways are to be treated after the war. It is possible that the methods of administration adopted as a war measure may be continued. This raises questions of a very far-reaching nature,

The railways, as they were organised prior to the catastrophe in 1914, were able in the country's hour of need to come forward in a very remarkable way to its assistance. On the North-Eastern Railway the proprietors equipped and furnished to the Government a complete battalion ready for the field. The men in the employment of the Company at the outbreak of war have taken service in numbers amounting to nearly a division. From the superior management have been provided five or six men who are held in the highest esteem by those who best know the services they have rendered, while the name of one is known to the whole world. I speak only of what I know. I do not doubt that the other railways, each in its degree, have done at least as well as the North-Eastern Railway. Should we not pause before we do away with an organisation which in our extremity gave us such results?

In considering this question, there is another matter of which sight must not be lost. The railway companies afford employment to over 600,000 persons, all of whom possess votes. We have heard in the past many complaints of the influence possessed by the railway interest in the House of Commons. Is there not some risk lest the powerful organisation possessed by railway workers may be used at a time of political difficulty to further their own advantage, without considering how the commonwealth may suffer? That railway magnates in the past have done wrong is no reason for putting it in the power of the railway organisation in the future to follow a painful example. It may be said that to consider this question is trenching rather on political than on economic ground, but the question which goes much further than the problem involved in the railways is one which must be kept in mind.

Finally, it should be noted that I stand in the very unusual position of having to bear the burden of two Presidential Addresses, for, as the Association is not holding the usual public meeting this year, the Council has decided that the office-bearers shall serve a second turn. Let us hope that when twelve months hence I address the Section it will be after peace has been proclaimed. We shall be beginning to repair the damage caused by the terrible struggle through which we are now passing. Perhaps we may be surprised

the way in which the difficulties we now foresee are overcome and the rapidity with which the traces of warfare are obliterated. If this is to be the case, it must be by means of the willing co-operation of all concerned; and the first requisite is complete understanding of the problems to be solved.

CHAPTER II

THE REPLACEMENT OF MEN BY WOMEN IN INDUSTRY DURING THE WAR

INTRODUCTION

THE enquiry into the replacement of men by women in industry has been continued under the auspices of the following Research Committee—

Professor W. R. Scott (Chairman), Ven. Archdeacon Cunningham, Professor E. C. K. Gonner, Professor Hallsworth, Mr. J. E. Highton, Professor A. W. Kirkaldy, and Professor J. C. Kydd (Secretary).

The information from the different districts referred to in the report has been obtained by the help of investigators in Glasgow, Newcastle, Leeds, Manchester, and Belfast. The pressure of the work on those who have been good enough to take part in the enquiry has made impossible the complete and thorough investigation which the circumstances merit; but what has been obtained is both representative and illustrative. The Committee are grateful to all who have assisted them in acquiring the material of this report. Employers have been invariably courteous and helpful, seeming to relish more the *vivâ voce* enquiries of the investigator than the many questionnaires of Government Departments. Welfare supervisors, Trade Union officials, Government officials, and many others have also placed us in their debt, and have enabled us in the following pages to make this survey of women's work in war-time.

Special mention should be made of Miss Grier, of Leeds University, and of Miss Mercier and Mr. R. S. Dower, who assisted her; of Miss Powell, of Queen's University, Belfast; of Mr. J. A. Halliday and Miss Stevenson, of Newcastle; and of Miss Barrowman, Miss McLean, Miss Simmons, and Messrs. J. E. and H. E. R. Highton, of Glasgow.

GENERAL REPORT

The present report consists of the following ten sections—

1. Dilution and the Replacement of Men by Women,
2. Statistical Results and Comparisons,

3. Industrial Processes upon which Women are Employed.
4. The Success of Women on Men's Work.
5. Time-keeping.
6. Sources of Female Labour.
7. Industrial Training.
8. Welfare Supervision and Welfare Work.
9. The Wages of Women in Industry.
10. Trade Unions and the Employment of Women after the War.

1. "DILUTION," AND THE REPLACEMENT OF MEN BY WOMEN

In the report presented last year, little more than passing reference could be made to the extension of schemes for what has come to be known as the dilution of labour by the introduction of women to employment which was previously chiefly reserved for male workers. But the principle of dilution has now been widely applied. In January, 1916, a Special Commission was appointed to introduce dilution in the Clyde district. The work of the Commission, instead of lasting for a few weeks as was anticipated, covered a period of several months. In May, the activities of the Commission were extended to the Tyne. On 23rd August, 1916, the Press Bureau issued the following statement by order of the Ministry of Munitions—

The Commission has now made such progress with its task, that it has become possible to continue the work on the Clyde and the Tyne on a somewhat modified basis. Dilution has already been established in 150 of the largest of the 300 controlled establishments (engineering and shipyard) on the Clyde, and some 14,000 women have been introduced by the Commissioners, the greater proportion of whom is engaged on general engineering work, ¹excluding shells.

Arrangements have been concluded for dilution in shipbuilding and ship-repairing yards on the Clyde and Tyne, with all the principal shipyard trades, and the interchangeability of members of different shipyard trades and the introduction into the shipyards of unskilled men and women are proceeding satisfactorily. Arrangements have accordingly been made whereby the current work of the Commission on the Clyde and Tyne will be taken over and continued as from

¹ This should read *including shells*. In last year's Report—cf. *Labour, Finance, and the War* (p. 78)—in a foot-note this was quoted, but the mistake in the wording was reproduced without comment. One authority writes: "So far as the Clyde district is concerned, dilution has in engineering work made substantial progress *only* in shell-making. That was true in 1916, and it is true to-day (August, 1917) so far as my information, gathered from very reliable sources, goes."

1st September by officers of the Ministry of Munitions and of the Admiralty, as in other parts of the country.

Thus the practice now is that the further extension of dilution of labour in controlled establishments is directed and encouraged by the Ministry of Munitions and Admiralty. To establishments which are not controlled, the Home Office and the Board of Trade have issued recommendations. A variety of pamphlets have been published under the auspices of these departments, making available for manufacturers all over the country the fullest information as to the processes in which, and the methods by which, temporary substitution of women for enlisted men has been carried out, or can be carried out in their trade.

The recommendations of these pamphlets followed upon an appeal issued jointly by the Home Secretary and the President of the Board of Trade in March, 1916, in which the attention of employers was drawn to the urgent necessity of concerted action for the purpose of making good the loss of labour caused by the withdrawal of men for the Forces. In this appeal, every employer who had not already done so, was urged to do two things—

1. To review the organisation of his works in order to ascertain how it is possible by re-arrangement of work and other measures, profitably to employ, as temporary substitutes, as large a number of women workers as possible.

2. To send to the local Labour Exchange at once—and from time to time as the situation develops—particulars of his requirements for women labour, with the fullest possible details as to the classes of work, and the qualifications required.

Further, these same Government Departments arranged a series of conferences between the employers and employees in various trades, which resulted in formal agreements being made between the associations of these employers and employees, whereby the further employment of women might be regulated during the period of the war—for these industrial agreements have all been regarded as emergency measures. In some of them, approval is given for the employment of women on work formerly done by men; in others, the exact processes on which women may be employed have been detailed. In several cases, the number of processes detailed in the latter has been extended since the first agreement was made.

Such general figures as are given below refer to the United Kingdom, but it is indicated in the special notes from Belfast¹ that little substitution of women for men has taken place in industrial occupations in Ireland, where the Military Service Acts are not applicable. Such dilution as has taken place has been, by the introduction of unskilled or semi-skilled men, drawn from the country districts. In "non-industrial" occupations in Ireland, replacement seems to be less exceptional.

Further, from the investigation made, it has been clear that the substitution of women for men in different industries, within the same industry in different districts, and within the same industry in different factories, has varied very considerably. There are many factors which account for the diversity that exists. The traditions of a district or a trade, the attitude of an employer to the introduction of women into his factory, the class of female labour available in the district, are some of such factors : but more important, perhaps, is the attitude and policy of the male workers in an industry or district.

In the Report of the Chief Inspector of Factories for 1915,² Miss Anderson, Principal Lady Inspector, writes as follows—

In the india-rubber trade, in two great factories doing similar work, there was no equality in substitution; in the one, women had been satisfactorily substituted in every process, even to the wrapping of cycle tyres; in the other, no substitution had been attempted. Inequalities such as these are not in all cases dependent only on the will of those responsible for organising the factory; in some cases they depend on the quality of the available supply of women. In a certain part of Scotland, women are being introduced for the first time into brickyards with considerable success, such employment being customary in other Scottish centres. In the West Riding of Yorkshire, success did not similarly attend the introduction of town-dwelling women, "doffers and tenters from the woollen mills, or married women . . . who speedily found themselves unable to meet the hard demand made upon them for continuous muscular exertion, under conditions of open air work in winter."

It is not unnatural to find, too, that in a number of trades, large firms have, on the whole, substituted women for men more freely than have the smaller firms. In this connection, the boot and shoe industry may afford an example. Women were employed in this industry before the war (to a total number of about 56,000), but the figures for replacement refer to those who are reckoned

¹ Page 121 below. ² Cd. 8276 of 1916 (p. 15).

as working in substitution for men who have enlisted. In Yorkshire, of six firms employing over 100 employees each, and with a total employment on 12th January of this year of 1,224, the percentage of replacement was 10·7. In the same district, of 25 firms employing under 100 employees each, and with a total employment of 1,064, the percentage of replacement was only 6·9. In the East Midlands, again, in the same industry, of 152 firms employing over 100 employees (and 35,316 in all), the percentage of replacement was 6·5; while for 66 small firms (with 4,280 employees) the percentage was 4·9. Throughout the country, 176,740 persons are estimated to have been employed in this industry on 12th January, 1917, and at that date the percentage of replacement was 6·2.

To take, as another instance, an industry of a completely different nature, in which few women were ever employed before the war, we find that in 38 shipbuilding yards employing 51,678 workers in January, 1917, the percentage of replacement was 2·4. Taking the figures for this industry throughout the Kingdom for this date, we find that 203,680 were employed, and that the percentage of replacement was only 1·5.

But it is needful to note again what was pointed out in last year's report—that in so far as there are many degrees of replacement, it is difficult to determine on a general survey how far women reckoned as replacing men are actually doing so. In some industries, and in certain commercial and professional occupations, some women may be doing the work of men who have left, although little or no additional labour has been engaged. Obviously, the mere increase in the number of women employed is no sufficient indication of replacement, which may be greater or less than such increase. From Tables 2 and 3 below, it will be seen that, although the total number of women employed in Hotels, Public-houses, Cinemas, Theatres, etc., actually decreased between July, 1916, and January, 1917, the number of those reckoned as directly replacing men remained almost the same over the period. In many cases—especially where a firm is engaged on munition work—women are employed on processes of which the firm had no previous experience; yet from the point of view of a general survey, such women are regarded as equivalent to those actually replacing men. In a sense, it may be said that such labour is additional

rather than substitutional, but the value of such a distinction will depend on the nature of the work performed. But here, too, as in other cases where the replacement has become necessary by the withdrawal of men, the substitution may not be complete. We may have indirect replacement, where the woman replaces a boy or youth, who may, in turn, take the place of a man. In a munition factory in Leeds (Firm "A" referred to below, p. 86) engaged in the manufacture of the forepart of shells, the amount of direct replacement is reckoned as small, owing to the readjustment of processes. "On the automatic machines the women have replaced boys, and the management considers that the result has been a gain in quietness and discipline. On the drilling machines also they replace boys."

Replacement may also be said to be partial where the women employed require the supervision of a skilled man. Reference might be made to shell factories, but the following instance is still more illustrative of the point. In a gun factory in the Clyde District, where dilution has been carried out to a very full extent, women are employed in gauging; but where four men were previously employed, four women and one man are now regarded as necessary. Of course, this just brings us to the very basis of the principle of dilution. The remark in the Leeds report below on Engineering is, indeed, typical of what might be said throughout: "There is a certain amount of genuine replacement in engineering works, though it is often difficult to trace because of the subdivision of processes, the change in the character of the work, and alteration in the size of the firms."

2. STATISTICAL RESULTS AND COMPARISONS

TABLE 1

STATE OF EMPLOYMENT AT VARIOUS DATES, COMPARED WITH STATE OF EMPLOYMENT IN JULY, 1914

"Industrial" Employment only, not including Government establishments
(Number employed July, 1914 = 100)

Females

	Apr., 1916.	July, 1916.	Oct., 1916.	Jan., 1917.	Apr., 1917.
Expansion in Numbers .	13.0 ¹	16.7	18.1	19.5	20.1

¹ This figure differs from that published last year, but has been revised in view of fuller information obtained.

The figures in the Table on p. 29 are given in continuation of those in Table I of last year's Report (*Labour, Finance, and the War*, p. 63).¹

In January, 1917, the percentage of the number of women employed on short time was 3·0, and on overtime 11·1.

The figures for all the Metal Trades, including controlled establishments, but excluding all Government establishments, show that in January, 1917, there was 159·1 per cent. increase on the number of women employed in July, 1914. The percentage of those employed in January, 1917, working on short time was 0·8, and on overtime 33·4. The great proportion of the work in these trades is, of course, on Government account. The Textile Trades and the Clothing Trades show a different condition of things. In the former, the percentage increase in January, 1917, on July, 1914, was only 2·9, which revealed a contraction of 0·6 per cent. on the figures for October, 1916. The figures for short time and overtime were respectively 2·7 per cent. and 3 per cent. In the Clothing Trades the decline is more marked, for there has been a contraction of 5·2 per cent. on the numbers employed in July, 1914, which is, again, a contraction of 2·7 per cent. on the numbers employed in October, 1916. 6·3 per cent. of the employees in January, 1917, were on short time, and 4·9 per cent. on overtime. The industries manufacturing boots and shoes are included under the Clothing Trades, and in them there is no decline, but an absolute expansion to the extent of 22·1 per cent., so that all the other industries under this head (*i.e.*, Clothing Trades)—*viz.*, Tailoring, Shirtmaking; Dressmaking; Millinery; Hat, Cap, and Bonnet-making; Gloves and Corset-making; Dyeing and Cleaning Trades; and Laundries—have to bear a higher share of the decline. It should be noted that the situation in the textile industries and in certain of these Clothing Trades is not due to lack of business, but to actual shortage of female labour. These industries have for long been regarded as typical women's industries, and in them the general rate of remuneration is lower than that in munition factories, and, generally, in work where women are being taken on under the schemes for dilution. There is sufficient evidence, from the statements of employers, that in certain branches of the textile

¹ This figure differs from that published last year, but has been revised in view of fuller information obtained.

industry favourable business prospects are being damaged by the difficulty of the labour situation. A firm in Scotland engaged in cotton-weaving complains of the scarcity of skilled textile workers caused by the competition of munition works and municipal employments. In certain respects, the unadjusted relations between skilled and unskilled labour in certain of the textile trades has only served to accentuate the labour difficulty.

Laundries are included under the Clothing Trades. In these the proportion of women to the total number of workers employed is now something like 86 per cent. The contraction on the number employed in July, 1914, is 14·3 per cent. And as many as 31 per cent. of the firms engaged in this work report their inability to obtain all the female labour they desire. A considerable amount of labour from the laundries has found its way into munition factories.

TABLE 2

	Esti- mated Number of Women employed in July, 1914.	Increase in Number employed since July, 1914. (July, 1917.)				
		Apr., 1916.	July, 1916.	Oct., 1916.	Jan., 1917.	Apr., 1917.
Industrial Occupations . . .	2,172,000	283,000	362,000	394,000	423,000	453,000 ¹
Commercial Occupations . . .	496,000	208,000	221,000	246,000	274,000	307,000
Professional Occupations . . .	67,500	13,000	14,000	15,000	18,000	21,000
Banking and Finance . . .	9,500	23,000	32,000	37,000	43,000	50,000
Hotels, Cinemas, etc. . .	176,000	12,000	20,000	16,000	10,000	13,000
Agriculture (Great Britain)						
(permanent labour) . . .	80,000	- 2,000	20,000	500	- 14,000	
Transport (not municipal) . . .	19,000	29,000	39,000	46,000	51,000	6,2000
Civil Service . . .	66,000	39,000	58,000	67,000	76,000	89,000
Government Establishments . . .	2,000	25,000	79,000	117,000	147,000	198,000
Local Government (including teachers) . . .	184,000	21,000	30,000	34,000	44,000	47,000 ²
	3,272,000	651,000	875,000	972,500	1,072,000	1,240,000 ³

[N.B.—The figures in this table and in following tables, unless otherwise stated, refer to the industry in which women are employed. The women are classified according to the occupation of their employer, and not according to their own occupations.]

In Table 2 it will be seen that the figures for January, 1917, indicate a considerable decline in the employment of women in agriculture. This decline is said to be entirely due to the season.

¹ On a revised figure for 1914 of 2,184,000.

² On a revised figure for 1914 of 198,000.

³ On a revised figure for 1914 of 3,298,000.

The proportion of decrease in relation to the numbers employed in July, 1914, is 17·5 per cent.; whereas in January, 1916, it was 26·2 per cent. And, further, with regard to this figure for January, it is reckoned, on a rough estimate, that 30 per cent. more women were employed than were normally employed in agriculture at this season of the year before the war. There is still considerable scope for further employment.

TABLE 3
(PERCENTAGES IN RELATION TO NUMBER OF WOMEN ACTUALLY EMPLOYED)

	Number of Women directly replacing Men.				
	Apr., 1916.	July, 1916.	Oct., 1916.	Jan., 1917.	Apr., 1917.
Industrial Occupations .	218,000 (8·8%)	268,000 (10·5%)	318,000 (12·3%)	376,000 (14·5%)	438,000 (16·6%)
Commercial Occupations .	181,000 (25·7%)	212,000 (29·5%)	245,000 (33·02%)	278,000 (36·1%)	308,000 (38·4%)
Professional Occupations	12,000 (14·9%)	15,000 (18·4%)	15,000 (18·2%)	17,000 (19·9%)	20,000 (22·6%)
Banking and Finance .	21,000 (64·6%)	31,000 (74·7%)	37,000 (79·6%)	42,000 (80%)	48,000 (80·7%)
Hotels, Cinemas, etc. .	27,000 (14·4%)	31,000 (15·8%)	30,000 (15·6%)	31,000 (16·7%)	35,000 (18·5%)
Agriculture (G. Britain) (permanent labour) .	22,000 (28·2%)	43,000 (43·0%)	26,000 (32·5%)	30,000 (45·5%)	32,000 (40·1%)
Transport (not municipal)	30,000 (62·5%)	39,000 (67·2%)	46,000 (70·7%)	52,000 (54·7%)	64,000 (79·0%)
Civil Service	30,000 (28·6%)	41,000 (33·07%)	64,000 (48·1%)	73,000 (51·4%)	83,000 (53·5%)
Government Establishments	13,000 (48·1%)	79,000 (97·5%)	117,000 (98·3%)	139,000 (93·3%)	187,000 (93·5%)
Local Government . . (including teachers)	18,000 (8·8%)	26,000 (12·2%)	31,000 (14·2%)	40,000 (17·5%)	41,000 (16·7%)
	572,000 (17·5%)	785,000 24%	929,000 (28·4%)	1,078,000 (39·2%)	1,256,000

Seasonal influences have also affected the figures for Hotels, Cinemas, etc., for in the three months from October to January about 2,700 additional females were employed in Theatres. But the difficulties attending the satisfaction of the demand for domestic servants for private houses have also affected Hotels, for these, with Public-houses, have lost 7,000 women since October, 1916.

In Table 3 the percentages (in brackets) are worked out in relation to the number of women actually employed in the different industries and occupations at the date specified. A more correct estimate of the extent of dilution and replacement in these different groups would, however, be obtained by taking the percentage in relation to the total number of persons engaged in the work, male and female. In every case, the percentage of replacement would then, necessarily, be less, and sometimes considerably so. For example, in industrial occupations in which, of all the groups, with the exception of agriculture, the proportion of replacement is least, on this basis of calculation also the percentage is reduced to 4.9. At the same time, it should be remembered that the greatest number of women are to be found in these industrial employments. On this basis, of the total number actually employed, the percentage of replacement is found to be greatest in Government establishments (not including controlled establishments engaged on munitions work), where it is 36.0; in Banking and Finance, 24.6; in the Civil Service, 22.8; and in Commercial occupations, 16.9. Of course, these groups are wide, and considerable variations in the extent of replacement exist as between the occupations included under the same group. For example, the Local Government group, which includes municipal tramways; municipal gas, water, and electricity supply companies; teachers under local authorities; and general municipal service, has a replacement percentage, on the basis referred to above, of 6.9. But the percentage of replacement in municipal tramway service is very much higher than this figure, being as much as 32.0.

In engineering firms (including those engaged on agricultural, marine, textile, constructional, and general engineering, the replacement figure is 7.14 per cent. of the total number of employees. In all the metal trades, it is slightly less, being 6.05 per cent.

The figures in Table 3 deal with the estimates of those regarded as directly replacing men. In addition to the numbers given, many are engaged in work in which they partially or indirectly replace men who have been withdrawn. Then it is important further to notice that the figures only refer to women who are employed. Those who are employers or who are working on their own account are, therefore, excluded. Further, account has not been taken of those employed in very small workshops in

dressmaking. Then, a great many women have always been employed in domestic service, of which also no account is taken above. Since the outbreak of the war, there has been a very considerable decrease in the number of women employed in small dressmaking establishments and in domestic service. In the former, the loss has been absolute; in the latter, much of the labour shortage is compensated by the extra work done in the home by the members of it. The total decrease in these two directions is estimated at 300,000. Taking into account this decrease, the increase in women employed in war hospitals, and the decrease of women employed in agriculture, it is estimated that in April, 1917, there was a net increase of 963,000 women employed in occupations outside their own homes over the number so employed in July, 1914. In seeking to estimate the work which women are now doing, reference should also be made to their employment in tending sick and wounded soldiers and sailors. In January, 1917, the total number of nurses, probationers, etc., so engaged was 42,500, of whom 13,000 are voluntary workers under the British Red Cross Society and St. John Ambulance Association. Part-time workers are not included as a unit in this figure; but, for example, where three women each give two days a week, they have been reckoned as one woman. At April, 1917, the increase in women at work in military, naval, and Red Cross hospitals is estimated as equivalent to an increase of 36,000 full-time workers.

3. INDUSTRIAL PROCESSES UPON WHICH WOMEN ARE EMPLOYED

A further question in relation to the replacement of men by women in industrial occupations is that with regard to the processes upon which women are employed, and the adaptations which have been effected to facilitate the introduction of female labour. In many works, especially, of course, in those employed upon munitions, processes have been subdivided considerably; re-arrangements of work have also been made; and, in many cases, special machines or special tools have been introduced in order to simplify an operation.

In shell factories, as was sufficiently described in last year's report, processes have been simplified and automatic machinery

introduced to such an extent that shell-making is now considered pre-eminently a woman's occupation.

In a publication entitled "Women's War Work," issued by the War Office in September of last year, lists are given of trades and processes on which women have been successfully employed. Under the heading of "Shells," this brief note is given—

Shrapnel, 3 in., all operations. H.E. shells, all machine operations on all sizes up to and including 9·2 in. (in some cases with assistance of special tackle for lifting 6 in., 8 in., and 9·2 in.; in other cases, with one labourer to five or ten women to do the lifting).

Such a statement requires to be considerably augmented now. In a shell factory in Glasgow, visited by an investigator, women were employed on 15-in. H.E. shells, on a two-shift system; and though the machines were necessarily heavy, the report was that the women managed them admirably.

In most factories, special arrangements are found for the convenient handling and transporting of the shells—particularly the heavier shells—from one machine to another. For instance, in one factory in the Glasgow district, each machine is fitted with a special jib crane, whereby the shell can be easily transferred from the lathe to a specially designed shell truck, which is of such a height that the centre line of a shell on it is approximately level with the lathe centres. In another Scottish shell shop, where, like that just mentioned, 6 in. H.E. shells are made, a different method has been adopted for the accomplishment of the same purpose. Here the shells are rolled instead of lifted. A bench running the whole length of the shop has been erected between each double row of machines, the height of this bench being practically on a level with the bed of the machine. Each machine is provided with a portable wooden skid whereby, when it is laid between the bench and the machine, a shell can be easily transferred from one to the other. The system of rolling benches has been found elsewhere combined with some arrangement of tongs and chain tackle, suspended from an overhead beam, whereby the shell may be lifted from the bench into the machine, and from the machine to the bench. In addition to such facilities for the lifting of shells, special apparatus is provided differing again in different shops, for preventing the breakage of cutters by unskilled hands; and by the means of automatic cut-offs and stops the possibility

of mistakes is greatly reduced. Often relatively small changes, such as in the simplification of the apparatus for holding a shell while it is being drilled, have made possible the extension of the work of women operators. (It is found that in other branches of industry the same process of adaptation has taken place; *e.g.*, in the heavy clothing trade there has been progressive development in the substitution of machine for hand-pressing. But the new machines are not of the old heavy type, but much lighter, so that they are capable of being easily worked by women.)

With regard to shop organisation, reference was made last year in the Glasgow report on Engineering¹ to "flying squads," consisting of women trained to all, or several of, the operations in shell-making, so that they could immediately take the place of women who were off, and whose absence might hold up material for subsequent operations. An arrangement of this nature has been found to be not uncommon, and it is obviously made necessary by the fact that the women on shell work are specialised for one machine. For example, the manager of the 15-in. H.E. shell factory referred to above said that he kept a certain proportion of women, trained to different operations, to take the place of those absent through sickness, or for other reasons.

There is no need to refer in detail to the operations on shell work performed by women. It is held by many that on work of such a nature, and as now developed, the only limit to the employment of women is the limit of their physical strength. However, in most factories, though by no means always, men are still retained as skilled supervisors and tool-setters, on account of the inability of a woman operator to set up her own machine. In munition factories other than shell factories, the proportion of women may be greater. Comparatively few men, except on the heavier labouring jobs, are being employed in a Scottish factory where 9-in. trench bombs are being welded and turned. Shell filling is work in which women have been widely employed. Of the total employees of a Glasgow filling factory, 94 per cent. are women. Another national filling factory in Scotland with 12,000 employees has a percentage of women of 93·7.

When we consider work other than shell-making, it is extremely difficult to give any adequate account of the work being done by

¹ *Labour, Finance, and the War* (p. 109).

women. On 26th March of this year, an exhibition organised by the Ministry of Munitions was opened in London, and at this several hundred photographs were displayed, illustrative of the work women are doing in many branches of industry engaged in the manufacture of munitions of war.

Actual specimens of the work done, as supplied by manufacturers employing the women, were also on view. In opening the exhibition, Mr. F. Kellaway, M.P., Parliamentary Secretary of the Ministry of Munitions, said that some months ago there were 471 processes in which women were engaged; to-day it was impossible to quote corresponding figures. Women might be said to be employed in the whole of the engineering and chemical trades. As an instance of the skilled work which women are doing, he referred to the fact that women were building a great part of one of the best high-speed engines in the country. Each woman was setting her own tools and work, and was able to machine any piece of work which the tool she was on would take.

While the statement of a prominent engineer, that, given two more years of war, he would undertake to build a battleship from keel to aerial in all its complex detail, entirely by woman labour, may lead to a certain misconception with regard to the work of which women are now capable in engineering, it has become clear, and such an exhibition merely served to make the fact more public, that women are successful not only when engaged as single-purpose tool minders on repetition work. Women are now operating with equal success general purpose machines. Women have mastered these machines upon which they have been placed, and to which, in a short space of time, they have been trained; so that they are able, as is indicated above, to do with the machine whatever its design permits. Such women, however, if called mechanics, as indeed they are in a sense, are not mechanics like the men they have replaced, who were, probably, in most cases, masters of several machines. As indicative of such precise work, more specific reference may be made to processes upon which women are employed in connection with aircraft construction, and especially the making of aero-engines. Women now perform successfully all operations, including fitting and final assembling, upon the air pump of rotary aero-engines; *e.g.*, turning worm spindle blank in a centre lathe to a limit on two diameters of plus or minus 0.01 mm.

(0.0004"). Women work to a similar limit in turning the 8 mm. diameter crank pin of the air pump. In all the operations on this part of the aero-engine, the female operators set and grind their tools. At the exhibition referred to, a photograph was displayed showing a woman operating and setting up for herself a No. 2 vertical Becker milling machine, milling the webs on the top of a cylinder for a Clerget rotary engine, to a limit of 0.05 mm. (0.002"). Such are exceptionally good examples of the skilled work which women are doing, although on many other operations which demand equal attention and skill the women do not invariably set up their own machines. As illustrative of the extent to which women are regarded as capable for work on aircraft construction, it is interesting to note that at an aeroplane factory in the South of Scotland the experiment is being tried of staffing the factory almost entirely by women. A lengthy list might be made also of the processes in connection with the construction of guns, gun-components, and gun and ammunition wagons, upon which women are successfully employed. They operate various lathes, vertical milling, shaping, slotting, grinding, and drilling machines, on the breech mechanism of different guns, and they mark off all parts of such mechanism not too heavy to handle. In a gunshop, women can be seen, too, employed on machines on many other kinds of non-repetition work. At benches they are to be found fitting, such as bedding down gear casings to Vernier and scale for 6-in. and 8-in. Howitzer sights. Much work is done in various processes on the manufacture of small arms, and on the manufacture of boilers of all kinds. Women have also been introduced into tool-rooms with success, and are engaged on precision work of many varieties. For example, marking off of pieces suitable for handling is increasingly common in many branches of work. In marine engineering, women are employed at the surface tables marking off such pieces as reversing engine brackets, columns for mine-sweepers, stop-valve covers, piston valve chests, cross-head and air-pump guides. Many women are engaged in work in the optical industry, where they have made good what was a serious deficiency of skilled labour. A considerable amount of woodwork is done by women in connection with aircraft construction, and in other branches of the same work they are to be found operating circular cross-cutting saws and doing various other operations. If, in addition

to what has been said above, reference be made to the fact of women's work in foundries (*e.g.*, core-making for brass castings in a marine engine works, or stump-moulding gun-metal ammunition box fittings), sufficient idea will be given of the part which women are taking in the manufacture of munitions of war of all kinds. Of course, it should be added that in all the branches of engineering and munition-making referred to, many women are employed as labourers. When we turn to other branches of industry, we find that women have taken up all sorts of work previously done by men, though here the limit of the extension of substitution is in large measure controlled by the trade agreements referred to above. To take but one example: in the manufacture of boots and shoes, many women were employed before the outbreak of war; but now, not only is a greater number of women employed,¹ but the work upon which they are engaged covers a great proportion of the operations in the factories—although some operations are still regarded as too heavy for women. Indeed, the general agreement for England, Wales, and Scotland, between the Federated Association of Boot and Shoe Manufacturers, and the National Union of Boot and Shoe Operatives, stated: "That the employment of women shall be limited to such operations as they are physically fit to perform."

If an attempt were made to record the processes in general work upon which women have been employed in substitution for men since the outbreak of war, an endless list might be made. The placings of a Labour Exchange for this period would show women who had been substituted—

- (i) as learners in sheet-metal working;
- (ii) as engine cleaners for a railway company;
- (iii) as machinists in a torpedo factory;
- (iv) as drivers for a tramway company;
- (v) as gas meter inspectors;
- (vi) as crane drivers;
- (vii) as insurance agents;
- (viii) as sawmill labourers;
- (ix) as cemetery labourers;
- (x) as railway porters;

¹ One large firm which has "substituted" well, formerly employed only 33.3 per cent. female labour, whereas now it employs 65 per cent.

- (xi) as painters of motor-car bodies;
- (xii) as machinists for engineering firms;
- (xiii) as plumbers in a shipyard;
- (xiv) as bill-posters;
- (xv) as electric welders;
- (xvi) as foundry workers;
- (xvii) as armature winders;
- (xviii) as postwomen;
- (xix) as lorry drivers;
- (xx) as wood-cutting machinists for shipbuilding;
- (xxi) as moulders at a grinding mill;
- (xxii) as chauffeuses;
- (xxiii) as lift attendants;
- (xxiv) as tinsmiths;
- (xxv) as solderers in gas meter works;
- (xxvi) as telephone repairers;
- (xxvii) as hay balers;
- (xxviii) as laboratory assistants for wholesale chemists;
- (xxix) as tailors' pressers;
- (xxx) as cinema operators;
- (xxxi) as bank clerks;
- (xxxii) as glass-blowers;
- (xxxiii) as pipe plasterers;
- (xxxiv) as bake-house assistants;
- (xxxv) as cork cutters;
- (xxxvi) as gardeners;
- (xxxvii) as core makers in an iron foundry, and as mechanics of many kinds.

And such a formidable list, very unsystematically chosen, is but illustrative. What was said above with regard to the limit of women's work in the manufacture of munitions might be said of industry in general.

In the Annual Report of the Chief Inspector of Factories for 1916,¹ official experience endorses such a view—

It appears that the one absolute limit to the replacement of men by women lies in those heavy occupations and processes where adaptation of plant or appliances cannot be effected so as to bring them within the compass even of selected women, of physical capacity above

¹ Cd. 8570 J, 1917 (p. 5).

the normal. Very surprising, however, is the outcome of careful selection, even in fairly heavy work, in rubber manufacture, paper mills, oil-cake and seed-crushing mills, shale oil works, shipyards, iron and tube works, chemical works, gas works and stacking of coal, tanyards, coarse ware and brick-making, flour-milling, and other trades. . . . It is permissible to wonder whether some of the surprise and admiration freely expressed in many quarters over new proofs of women's physical capacity and endurance, is not in part attributable to lack of knowledge or appreciation of the very heavy and strenuous nature of much of normal, pre-war work for women, domestic and industrial.

It will be seen that the situation since reported on last year, has, in a sense, developed considerably, for women are now engaged on a much wider range of operations. In many cases, too, the work done requires great skill. It is true that such skill may not be comparable in nature, though in its output it is most successfully so, with the skill of the all-round mechanic. And even when account is taken of the fact that the introduction of women has, in so many cases, been facilitated by the reorganisation of work so that women may do the lighter parts of it—by sectionalising in some other way, by important simplification of the machines to be operated, by the provision of appliances such as lifting tackle, by the help of skilled male (though sometimes, now, female) supervision, and by the growth of many kinds of what has come to be known as "Welfare" supervision, so that much of such replacement as has taken place may be spoken of as partial—yet the commercial value of the work of women is of immense importance. In any case, it is clear that women in industry are capable of doing successfully not merely such unskilled work in labouring as their physical strength can compass, nor merely work of a repetitive or routine nature, but work of a much higher order, when they have had training for it. And it is also clear that, as they gain more experience, the limit of their industrial usefulness has not yet been reached.

4. THE SUCCESS OF WOMEN ON MEN'S WORK

When the facts noted above with regard to the work of women in substitution for men have been taken into account, it is further interesting to consider how far women have been really successful in the work they have undertaken. It appears from our investigation that, in many cases, women entering industry have been free

from such restrictions with regard to the amount of work to be done, as the men have sometimes placed upon themselves, so that their output has at once compared most favourably with that of the men they have replaced. An instance may be noted from the record of an investigation in an engineering shop in Glasgow. The operation is copper band cutting. A skilled man was formerly on the job. He cut, on an average, 75 bands a day. Under the dilution scheme, his daughter was taken on, and put in his place, receiving such training as was necessary from her father. It was not long till she was cutting 137 bands a day. And it is generally known that on shell work, with the incentive of straight piece rates, the output of women operators within the past twelve months has been unparalleled. The increased output in shells which has in large measure been attained since the foundation of the Ministry of Munitions, and the subsequent recruitment of female labour for work in the factories, with all the adaptation and re-arrangement that has been effected for the purpose of speeding up, has been referred to in many ways, but never more strikingly than when it was officially declared that a year's output at the rate attained in 1914-15 is now provided in the following periods—

18-pounder ammunition in thirteen days.

Heavy Howitzer shells in seven days.

Shells for medium guns and Howitzers in five days.

Shells for heavy guns in less than a day.

Another specific reference might be made. Five women in a printing establishment were put in charge of the disc-ruling machines. The output of the women on these machines is now distinctly higher than that of any man formerly employed. The manager of the firm attributes this to the greater deftness of the women in managing the cords in the machine.

Of course, it is impossible to institute any adequate measure of comparison between the work of men and women. But Appendix below (p. 140) gives a very interesting record of the work done by four women employed in a Glasgow factory in marking off, in relation to the work of the men at the same table. The comparison cannot, however, be continued, as the man still at the table is now chiefly engaged on the more detailed parts for which the women are not experienced. In this connection, with regard to

marking off, it may be said that in the works in the Glasgow district where enquiries were made, and where women were engaged at the surface tables, it was considered that, for the lighter pieces, they had proved eminently successful.

At the same time, reference should be made to cases where the output of women replacing men is definitely less than that previously attained. In the report below, on tailoring in Leeds, it is noted that fourteen employers out of twenty-one reported that the output of the women was less than that of the men they replaced. In quite another line of work, we find that in banking, in Scotland, where temporary female assistance has been made use of, the women are not called upon to do as much as their male predecessors. (The ratio is said to be something like three to two.) But this is not necessarily the result of the inability of women to compass the work.

Taking a wider survey, an attempt was made to obtain sufficient authoritative opinion with regard to the woman worker's relative power of initiative, concentration, self-reliance, endurance or staying-power, conscientiousness, ambition, adaptability and accuracy, to permit of a judgment, from such criteria, of at least certain elements of comparison. But, as was perhaps to be expected, the results have been singularly inconclusive or inadequate, for division of opinion has been considerable. In a sense, for example, in few lines of industry, or even in other occupations, has sufficient scope been given for the adequate testing of the power of initiative of women. Many favourable expressions of opinion have been made with regard to the conscientiousness of women, and some with regard to their concentration. An employer in a gun factory was proud of a girl who, while still intent upon her work at the machine, had thrown an abrupt answer over her shoulder to a question asked by some distinguished person who was visiting the works. Women, too, seem to be capable of great accuracy in certain kinds of work, but there is little value in referring to these points in fuller detail as the opinions expressed are not such as would warrant any conclusion. It has been possible, however, to make a somewhat closer investigation of the question of time-keeping and, in connection with it, that of endurance. A separate section below is devoted to this matter of timekeeping.

On the whole, however, it may be said, from enquiries made in

Glasgow, the results of which are not separately published, and from those of which the results are printed below, that, generally, employers with experience speak very favourably of the work which the women are accomplishing. Where labour difficulties have in times past been acute, they tend even to be extravagant in their praise of women.

5. TIMEKEEPING

In dealing with the question of timekeeping, especially when any attempt is made at comparison of the timekeeping figures for men and women employed in industry, many special difficulties present themselves. Naturally, special considerations seem to affect the results very materially when account is taken of the circumstances prevailing in a particular district or a particular establishment, but it is often, even then, difficult to account for the considerable variations which occur. For example, in three engineering establishments at Glasgow, controlled by the same firm, where workers of the same type are employed, figures for timekeeping for a fortnight at the end of 1916 were obtained. The hours lost per worker do not include time lost on leave, absence through illness, or less than $2\frac{3}{4}$ hours per day. In Establishment I, where 2,496 workers are employed, the hours lost per worker for the fortnight were 2·12; in Establishment II, where the numbers are 2,486, the hours lost per worker were 3·84; and in Establishment III, for 1,661 employees, the hours lost were 2·96 per worker. Thus considerable variations occur, which are not easily accounted for, and with regard to particular groups of workers, these are sometimes greater still. In No. 1, there were 327 boilermakers and helpers, and on an average they each lost 2·22 hours for the time under consideration; in No. 2, 294 boilermakers and helpers lost as much as 7·10 hours; while in No. 3, 145 boilermakers and helpers lost 4·4 hours. In this case, the dilution of labour has not been extensively applied, but the figures are given as illustrative of difficulties attending any adequate enquiry into the matter of timekeeping and the dangers of easy generalisations.

While we may postpone for the moment the consideration of the causes of lost time, it may here be pointed out that for purposes of adequate comparison between the sexes, one important element is the relative question of the amount of overtime worked—and

also, more obviously, the system of shifts upon which employees work. For example, in many industries at the present time, we are prepared to find that men are working overtime to a much larger extent than women, and that this fact may influence time-keeping in more ways than one will become clear. Where possible, then, it is certainly advisable to place figures for timekeeping and for overtime in juxtaposition, for where the latter are at all heavy, it seems certain that they have an adverse effect upon the totals of the former.

In an Interim Report on Industrial Efficiency and Fatigue, presented by the Health of Munition Workers' Committee in February of this year to the Minister of Munitions, Professor Loveday, of the University of Durham, is responsible for a special report on the causes and conditions of lost time. Referring to the point raised here, he gives the following example¹—

How considerable a proportion of the time gained by extraordinary hours may be lost in normal hours, even in a well-managed factory in which the goodwill of the employees is undisputed, is illustrated by the following figures, which refer to the engineering departments of a firm engaged on heavy work. The normal day-shift week is 53 hours, and the night-shift week, 60 hours.

Period.	Percentage of employees working overtime.	Average hours worked overtime by those so working.	Per cent. ratio of hours worked overtime to practically possible normal hours of all employees.	Percentage of employees working on Sunday.	Percentage ratio of Sunday hours to total overtime.	Percentage ratio of hours lost by bad time-keeping and sickness to hours gained by working overtime.
May, 1916 . . . (4 weeks)	78.4	13.0	19.7	62.0	61.0	53.0
June, 1916 . . . (2 weeks)	72.0	12.7	16.9	60.0	57.0	59.6

Professor Loveday adds that "the high percentage of loss is mainly attributable to a very high sickness rate, itself the result of long hours on heavy work since the beginning of the war."

But even when no account is taken of time lost "unavoidably," that is, through sickness, accident, or with leave of absence, the

¹ Cd. 8511 J, 1917 (p. 44).

percentage of hours lost "avoidably," to the hours gained by overtime work may be considerable. For example, in shipbuilding the number of hours lost through avoidable causes is high, as is also the amount of overtime worked. For eighty-three establishments engaged in shipbuilding, the average number of hours of normal time lost per employee in the week ending 17th March, 1916, through "avoidable" causes was 4·24; and the average number of hours of overtime worked per employee for the same period was 7·05, giving a percentage ratio of the former to the latter of 60·14. Although it would naturally be difficult to determine, and would in different industries, and perhaps different districts, vary considerably, there is a point at which the increase in the amount of overtime worked is no longer valuable. Indeed, generally speaking, it may be said that an hour gained in overtime is worth less in productive value than an hour lost from normal time. Hence the percentage ratio of lost normal time to overtime understates the true "set-off" of the former against the latter, and as a rule this understatement will be greater, the larger the two quantities compared, even where the per cent. ratio remains the same. This last point is of some importance in comparing such per cent. ratios for *men* with those for *women*; since men almost invariably work more overtime than women.

Because of some of the difficulties mentioned, and of the many variable influences which affect the whole question, no figures have been obtained which merit any attempt at comparison between timekeeping on the pre-war basis and timekeeping in industry at the present time. The figures given below (in Leeds General Notes, pp. 6 and 7) are of interest, but are of no great value for this purpose. In a large firm in the metal trade—now employing about 12,000 workers, a number not dissimilar from the pre-war figure—statistics were obtained for timekeeping from the beginning of 1913 to the end of June, 1916. They show that, for all causes, the percentages of lost time in 1913 was 3·23; in the first half of 1914, 2·80; in 1915, 3·63; and in the first half of 1916, 3·24. But from this no conclusion can be drawn, especially as the system upon which these records of timekeeping were obtained, was not ascertained.

Taking a wide survey, however, a certain amount of data is available for purposes of comparison.

TABLE I
(TIMEKEEPING)

*Showing Figures for Time Lost in Certain Establishments,
for week ending 17th March, 1916*

1,307 establishments in Iron and Steel, Tinplate, Wire-drawing, Hardware, Engineering, Electrical Engineering, Shipbuilding, Cycles and Motors, Railway Carriages and Wagons, Cutlery, Tools, Small Arms, Scientific Instruments, and other metal industries.	Average number of hours of normal time lost per employee in week ending 17th March, 1916, exclusive of time lost through sickness, accident, or leave of absence. (1)	Average number of hours of overtime worked per employee in week ending 17th March, 1916. (2)
Males	1.8	5.7
Females	1.2 (under 18 yrs. = 0.8 over 18 yrs. = 1.4)	2.8

The figures for shipbuilding referred to above are included in the results of this table. If they are excluded, the revised figures in (1) and (2) would read: For males, 1.4 and 5.5; and for females, 1.1 and 2.8 respectively.

With the results indicated by Table I may be compared those recorded in Table II, which shows figures for certain establishments in building, limestone quarries, iron and steel, tinplate, wire-drawing, and hardware industries for the week ending 16th February, 1917. In this Table the same distinction between time lost avoidably and unavoidably is made, but details for both are recorded—

TABLE II
(TIMEKEEPING)

657 Establishments.	Average number of hours of normal time lost per head in week ending 16 Feb., 1917, exclusive of time lost through sickness, accident, or leave of absence. (1)	Average number of hours of normal time lost per head in week ending 16 Feb., 1917, through sickness, accident, or leave of absence. (2)	Average number of hours overtime worked per head in the week ending 16 Feb., 1917. (3)
Males	0.9	1.5	4.1
Females	1.4	3.7	1.4

The 657 establishments include 408 connected with iron and steel manufacture, and there the greater proportion of men and women are employed. The figures for Columns (1), (2), and (3), for males in the iron and steel trades, are: 0·9, 1·6, 4·2; and for females, 1·7, 8·1, and 1·2 respectively.

Table III is compiled in a manner similar to Table II, for 789 Engineering firms for week ending 16th March, 1917—

TABLE III
(TIMEKEEPING)

789 Engineering Establishments.	Average number of hours normal time lost per head "Avoidably."	Average number of hours lost per head through sickness, etc.	Total of Columns (1) and (2).	Average number of hours overtime worked per head.
	(1)	(2)		(3)
Males . . .	1·1	1·8	2·9	5·9
Females. . .	0·6	1·2	1·8	2·4

These figures are approximations, as in about 10 per cent. of the cases no distinction was made between time lost "avoidably" and "unavoidably."

Table IV is compiled in a manner similar to Tables II and III, for 654 establishments engaged in a variety of industries, for week ending 30th March, 1917. (See page 49.)

Table V (see page 50) is a detailed statement with regard to time-keeping in a 6-in. H.E. shell factory in Scotland, where the percentage of women was approximately 56. Except for a small proportion of women working the heavier machines, about 150 in all, who worked on a three-shift system, work for both males and females is on a two-shift system.

Table VI (see page 51) gives the figures, for purpose of comparison, in the form of percentage ratios of time lost unavoidably to total time lost.

In the report referred to above, on the causes and conditions of lost time,¹ Professor Loveday indicates how, in four factories, where enquiry was made by him, where timekeeping was

¹ Cd. 8511 (p. 48).

reasonably good and records were carefully made, the unavoidable loss was found to be more than half the total.

TABLE IV
(TIMEKEEPING)

Trade Group and Number of Firms.		Average number of hours normal time lost per head "avoidably."	Average number of hours lost per head through sickness, etc.	Total of Columns (1) and (2).	Average number of hours overtime worked per head.
		(1)	(2)		(3)
Agricultural Engineering (6)	M.	1.04	2.4	3.4	4.7
	F.	1.2	.8	2.1	2.1
Marine Engineering (21)	M.	1.9	1.1	3.0	7.3
	F.	1.2	.5	1.7	4.1
Textile Machining (46)	M.	0.6	1.1	1.7	3.0
	F.	1.1	2.6	3.7	2.0
Constructional Engineering (48)	M.	1.2	1.4	2.6	3.0
	F.	1.3	2.2	3.5	1.8
Electrical Engineering (78)	M.	0.5	1.2	1.7	7.2
	F.	0.5	1.2	1.6	3.3
Cycle & Motor Manufacture (84)	M.	0.8	1.0	1.8	5.7
	F.	0.5	0.8	1.3	2.2
Railway Carriage Works (14)	M.	1.1	1.9	3.0	3.7
	F.	0.8	1.5	2.3	1.6
Carriage, Cart Works (20)	M.	1.0	1.4	2.3	4.1
	F.	1.1	1.6	2.7	0.6
Cutlery, Small Arms, etc. (137)	M.	0.8	1.1	1.9	5.7
	F.	0.7	1.0	1.7	2.8
Brass & Copper Works (188)	M.	1.1	1.5	2.6	4.3
	F.	1.1	1.1	2.2	1.7
Jewellery, Electro-plating (12)	M.	0.2	1.2	1.3	4.4
	F.	0.2	1.6	1.7	2.2
Total for 654 establishments	M.	0.9	1.3	2.2	4.7
	F.	0.7	1.3	2.0	2.5

The tentative conclusion which he bases upon his observation is amply borne out by the figures given above. And it will be

seen, further, from Table V, that in the case of men, in most cases sickness alone accounts for at least 50 per cent. of the lost time. This is so with regard to women in every case. The records with regard to timekeeping are well kept. The appointment of a woman visitor has made possible greater accuracy in the recording of time lost through sickness. It was frequently found that a

TABLE V
(TIMEKEEPING)

	Total possible time.	Time lost through illness.	Time lost through accident.	Time lost through leave of absence.	Time lost through lateness.	Time lost for other reasons.	Total time lost.
3/3/17 M. } F. }	67,560 109,440	1,835 4,067	179 26	69 389	285 289	650 682	3,018 5,453
10/3/17 M. } F. }	67,260 108,960	1,294 7,385	214.25 404.25	88.5 207.25	270 185	661.7 2,513	2,528.5 10,694.5
17/3/17 M. } F. }	67,650 108,720	2,393 7,087	369.5 463	166 425	570 600	1,017 1,780	4,515.5 10,355
24/3/17 M. } F. }	67,650 108,180	1,729 5,948.5	276.5 253.75	134.5 479.75	578 618	786.5 482.5	3,504.5 7,782.5
31/3/17 M. } F. }	66,960 107,820	1,393.75 6,300.5	263.75 410.75	111 547.25	368.75 158	1,309.75 1,917.25	3,447 9,333.75
7/4/17 M. } F. }	65,940 107,220	2,143.25 4,554.5	181.5 563	251.75 751.75	321.75 222.5	755.28 1,922.25	3,653.5 8,014
14/4/17 M. } F. }	65,310 106,020	1,795.25 5,591.5	182.25 479.5	256.5 436.5	874 749.25	1,000.75 1,568	4,108.75 8,824.75
21/4/17 M. } F. }	64,800 105,720	1,773.5 4,239	162 406	101 601	407 645.25	907 530	3,350.5 6,421.25

female employee would not turn up at work, and her absence was left unexplained; she would send no word. In many cases, if she were well, and did not wish to return to work, she would not apply for a clearance line, so that her absence up to a week was recorded as time lost. Now, if a female worker has been off for two days without leave, the Factory Visitor calls upon her. If she is unwell, her sickness is recorded. If well, but undesirous of returning, her name is struck off the books. If her absence is due to slackness,

TABLE VI
(TIMEKEEPING)

Week ending	Percentage of time lost through illness, accident, and on leave of absence, to total possible hours.	Percentage of time lost through lateness and for other reasons, to total possible hours.	Percentage of total time lost to total possible hours.	Percentage of time lost unavoidably, to total time lost.
3/3/17 . M. } . F. }	3.1 4.1	1.4 .9	4.4 5.0	69.0 82.2
10/3/17 . M. } . F. }	2.4 7.3	1.4 2.5	3.8 9.8	62.2 74.8
17/3/17 . M. } . F. }	4.3 7.3	2.4 2.2	6.7 9.5	64.9 77.0
24/3/17 . M. } . F. }	3.2 6.2	2.0 1.1	5.2 7.2	61.1 85.9
31/3/17 . M. } . F. }	2.6 6.7	2.5 1.9	5.2 8.7	51.3 76.7
7/4/17 . M. } . F. }	3.9 5.5	1.6 2	5.5 7.5	70.5 73.2
14/4/17 . M. } . F. }	3.4 6.1	2.9 2.2	6.3 8.3	54.4 73.7
21/4/17 . M. } . F. }	3.1 5.0	2.0 1.1	5.2 6.1	60.8 81.7
Total for M. } 8 weeks F. }	3.3 6.0	2.0 1.7	5.3 7.8	61.7 77.8

she has to return at once to work. As indicated in the above tables, the records of broken time differentiate between time lost through illness, through accident, through leave of absence, through lateness, and through other causes.

From the statistics with regard to timekeeping recorded in the tables above, only tentative conclusions can be drawn. It would seem from Tables I, III, and IV, that in the metal trades the women employed keep better time than the men. Table II, however, shows the men at a considerable advantage. In all cases, the hours of overtime worked by the men are greater than those worked by the women. It may be noted that in the cases where

women are recorded as keeping the better time, the proportion of their advantage is smaller in the case of time "unavoidably" lost; where they are recorded as keeping worse time than the men, the proportion of their disadvantage is greater in the case of time "unavoidably" lost. When we turn to consider Tables V and VI, which deal with the particular case of a shell factory, where the records of time are well kept, where errors which might vitiate to some extent the previous results are more capable of detection; and where the figures cover a period which affords a more adequate sample than one week can possibly do, we find that the average time lost by men for all causes is considerably less than the average time lost by women. The greater proportion of the difference is accounted for by the time lost by women through unavoidable causes, and chiefly through illness. This shell factory was started later than many others in the district, and therefore was unable to pick and choose its female employees as it might otherwise have done. But this fact, which might account for part of the considerable difference, is said to be compensated by the fact that the men were not picked, for the same reason, and are probably no more normal than the women. Certainly the percentages of total time lost, both for men and for women, compare unfavourably with the results shown in somewhat different form in the preceding tables. In a larger establishment in the Glasgow district, where a great many women are employed, the figures for the timekeeping of a few women chosen indiscriminately from five different departments were taken over a period of six weeks ending 15th May, 1917. Over this period the percentage ratio of total time lost to total possible hours was 6·9. In the sample taken for one department, where the work could not be described as of a heavy nature, the percentage was as high as 12·8, while in the engineering shop it was as low as 3·6. In another 6-in. shell shop in Glasgow district, where the female labour is reported as of particularly good quality, the percentage of time lost by women is estimated as about 4·7. In this case, it is to be noted that the figures for timekeeping take no account of workers who have been absent all the week. Reference may also be made to the factories investigated by Professor Loveday,¹ where trustworthy records of timekeeping are kept. "Both are small factories," he writes, "engaged on

¹ Cd. 8511 (p. 48).

moderately heavy work, with moderate overtime. In one, employing about 240 men, the total loss of possible time for twelve months to the end of September, 1916, was 7·3 per cent., and sickness alone accounted for 54 per cent. of this loss. In the other, the total loss in a period of August, 1916, among about 130 men in the engineering and tool shops was 5 per cent.; sickness accounted for 46 per cent. of the loss, and unavoidable causes generally for 59·9 per cent. of it."

It may be said that the figures recorded on Table VI are probably not really so far from being normal.

The conclusions suggested by the results of Tables V and VI are corroborated by the results recorded by Professor Loveday, from a careful investigation made in one department of a large factory where about 270 males and 290 females were engaged upon work of a light nature.¹ The investigation covered the period from the week ending 6th June, 1916, to the week ending 19th September of the same year. The percentage ratio, for the whole period, of time lost avoidably, to gross normal time, was, in the case of men, 1·9; in the case of women, 1·8. The percentage ratio of time lost unavoidably, to gross normal time, was, for men, 3·6; for women, 5·7: giving a percentage of total time lost to gross normal time for men of 5·5; for women, 7·6. In this case, as mentioned, as in the case to which Tables V and VI refer, the timekeeping records were carefully made; and, in relation to this fact, the similarity of the results is certainly striking. Unfortunately, such adequate scrutiny of the exact origin of the figures recorded in Tables I, II, III, and IV is not possible; and while it is not implied that the results fail to give what may be a just comparison of the time lost by men and by women, further examination would certainly be valuable. The conclusions of Professor Loveday, made after his wide investigation, are no doubt well founded.² "Sickness records which suggest that even the best-managed factories are health resorts are probably untrustworthy. Nearly all records understate, and most records understate greatly, the proportion of lost time due to sickness and other unavoidable causes. The main reason for the unsatisfactory sickness records," he adds, "is employees' distrust of medical

¹ Cd. 8511 (p. 47).

² Cd. 8511 (p. 51).

certificates." It has been found that it is not the general custom to keep such accurate records of time lost through unavoidable causes, as of what is known as "bad timekeeping." Certainly in few cases is it the practice to keep a sickness register.

With regard to timekeeping statistics, it may then be noted—

1. That the systems upon which the records of timekeeping are made vary considerably, and are often determined chiefly by what the management considers will serve most directly to improve the organisation of the factory. The development of welfare departments in many establishments, consequent upon the introduction or great extension of female labour, has led to more attention being paid, especially so far as the women are concerned, to the accurate recording of sickness, accident, and what has been referred to as "bad timekeeping."

2. That a wide variety of circumstances affect timekeeping in different industries, different factories in the same industry, different districts, and different factories in the same district. Important among such circumstances are the amount of overtime worked, the normal length of hours for which labour is employed daily, and what might be called the physical quality of the labour. In many establishments, from which many men have gone to join H.M. Forces, this percentage of time lost is said to be high because the physical quality of the labour remaining is below the normal. Often, too, where the proportion of men employed has been seriously reduced, and where one or two chronic bad timekeepers remain, they increase unduly the percentage of time lost. This element is obviously equally important in relation to female labour. Passing reference has already been made to the fact that many women have left domestic service to enter industry; and the Welfare Supervisor of a large firm in Glasgow, engaged in engineering and shell work, out of her experience reports—

The domestic servant is the best type of worker: she is an early riser, and has endurance. A great deal of this is due to the fact that she has been invariably well-fed in her situations.

3. That sickness alone seems to account for about 50 per cent. of the total time lost. It is possible that if records were more accurately kept, the proportion would be found to be even greater. Certainly it is clear that unavoidable causes generally account for the greater proportion of time lost. But, from the records

available, it appears that "bad timekeeping," by which is meant time lost through avoidable causes, is a considerable element.

A report by the Mission appointed by the Director-General of Recruiting for Munitions Work, on the output of Munitions in France, refers in the following manner to timekeeping¹—

A remarkable feature in the French factories is the almost entire absence of lost time. The time lost by the workpeople owing to avoidable causes does not exceed, on the average, 1 per cent. of the total time.

In view of the fact that a larger percentage of lost time is frequently an adequate evidence of industrial fatigue, brief reference must be made to this. In Memo. No. 7 of the Health of Munition Workers' Committee, the following considered statement appears—

At the present time, in very many munition factories, the complaint is made by workers, and not least by the most intelligent and willing of them, that they are feeling "done up," or "fair whacked," to use local phrases; and the evidence shows that this state of "staleness" is becoming increasingly common and obvious. By experienced managers and medical officers, this condition of "staleness" is attributed almost wholly to persistent long hours and the deprivation of weekly rest. It has grave accompaniments, which paradoxically appear not only in a state of lethargy and indifference, but also in a craving for change and excitement. No doubt the restlessness of the conditions must often predispose also to indulgence in the alleviations given by alcohol. At all points the state is apt to set up a vicious circle, in which the very need for change and rest prevents the proper use of such chances of rest as are given.

Alongside such a statement, and in view of the fuller discussion which this topic merits, it is interesting to place the observations of the Mission above referred to on industrial fatigue amongst employees in munition factories in France—

There is no evidence of fatigue due to the long hours worked either on day shift or night shift. . . . Perhaps the best evidence of the absence of industrial fatigue is afforded by the intensity of production and the good timekeeping. On the other hand, it must be kept in view that the long break in the middle of the day, and the absence of overtime beyond the usual working hours, have no doubt an important bearing on this question.

While the conclusions of this French Mission are undoubted, it is only right to say that their stay in France was not a long one, and that they visited twenty-three establishments engaged in the production of munitions. The recent investigation of Professor

¹ Cd. 8187, 1916 (p. 6).

A. F. Stanley Kent, of Bristol University, on behalf of the Home Office, is singularly instructive. (*Cf.* First and Second Interim Reports on an Investigation of Industrial Fatigue by Physiological Methods.—Cd. 8056 of 1915 and Cd. 8335 of 1916.) While recognising that industrial fatigue cannot be altogether accounted for by the duration and character of work performed, when the influence of so many conditions outside the factory may predispose a worker to it, Professor Kent states emphatically that “overtime labour is physiologically and economically extravagant. It frequently fails in achieving its object.”¹ From his investigations, it is clear that overtime increases fatigue accumulation. But using the loss of normal time as a sort of industrial test, he has sought to judge of the influence of overtime upon the general health of the worker. The conclusions based upon his observation are stated thus²—

The general health of the worker, upon which his rate of working and his powers of endurance depend, so far as it can be gauged by the tests used in this investigation, appears to be prejudiced by the introduction of overtime and, to a less extent, by work in the early morning hours. The suspension of overtime was followed in every case by an improvement in the condition of the worker. In a large proportion of cases, that condition was further improved by the suspension of work in the early morning hours.

Such conclusions are the result of a careful intensive study, and perhaps they may serve to demonstrate the insufficiency of such general results as are tabulated in Table IV above.

The Causes of Loss of Time

In what has been said above with regard to time lost, a broad distinction has been drawn between such time as is “unavoidably” lost, and that “avoidably” lost. In some respects the distinction is arbitrary and not absolute; and, as has been indicated, in some establishments where statistics of timekeeping are recorded, the practical value of even this arbitrary distinction is not recognised, thereby increasing once more the difficulties of adequate investigation. But, broadly, the “unavoidable” causes have been taken to include sickness, illness through accident, and absence on leave. Where the distinction is drawn, other causes would be

¹ Cd. 8335 (p. 22).

² Cd. 8335 (p. 65).

classed as "avoidable"—and as contributing to what is referred to as "bad timekeeping." But, of course, sickness and accident are not the only causes of lost time which the worker may be said, in a wide sense, to be unable to control. For example, one influence, which though not of great importance generally, was referred to more than once in the course of our enquiries, was that of lack of material. Workers have been kept idle for periods, generally not of long duration, through this cause, which, although perhaps covered by leave, is certainly unavoidable. It may be operative, too, for example, in a shell factory when it is changing over from making one type of shell to making another type. Transport difficulties, again, may make the best intentioned worker late. Workers are frequently employed at a considerable distance from the district in which their own homes are situated, though it might have been possible for them to get employment nearer home. Two shell factories in Glasgow district, situated some nine miles apart, each recruited a certain amount of its female labour from the district in which the other was situated. The manager in one was of opinion that many women liked being employed a considerable distance from home. But the train service between these places is good, and one of the firms has made special arrangements with the railway company for the transport of its employees. On the whole, the train and tram service in Glasgow was found to be good and adequate, but the cross-river service has been referred to as inadequate. Where men and women are employed in considerable numbers, it is common practice to let the latter get off a few minutes earlier than the former, and sometimes to start a few minutes later. This enables them to get the first trams and trains, and it is found, for other reasons, too, to be an admirable arrangement. Nevertheless, in several centres, inadequate tram and train facilities—frequently due, it is true, to the prevalence of war conditions, are responsible for a certain amount of time lost.

Bad weather is another influence which may be responsible for a certain loss of time, particularly, of course, when work has to be carried on in the open air, as in shipyards. The proportion of women so employed, however, was found from the enquiries made to be comparatively small; but in the case of women such a cause would, naturally, be even more important than in the case of men. Illness due to bad weather has been met with. So far, bad weather

is an "unavoidable" cause. But where workers stay away from their work because, say, the morning is wet, it cannot be regarded as altogether an "unavoidable" cause. For example, the following statement by a Welsh firm is interesting, though not suggested as representative—

Timekeeping generally very good amongst men and boys; girls lost time, especially in wet weather.

Many of the women who have been recruited for industrial employment since the outbreak of war are married women, and there is sufficient evidence to show that the domestic duties of such women account for much of the time which they lose. Frequently the opinion has been expressed that, on this account, married women lose more time than single women. But in no instance has it been found that in recorded statistics have the figures for these two classes of female employees been kept distinct. One firm in the Glasgow district reported that it found married women better timekeepers, attributing this to their greater sense of responsibility. Of course, the experience of different firms, in this connection, differs on account of their practice and their attitude to married women employees. Some have given special opportunities for employment to the wives of their men who have joined the Forces. Such women may not be good workers, and the fact that they are not wholly dependent on the wages they make, while they receive an allowance or pension, takes from them undoubtedly a certain incentive. The manager of one shell factory in the Glasgow district, where the timekeeping was found to be good, makes special enquiries when married women offer themselves for employment. If they have children dependent upon attention, he satisfies himself before engaging the women that adequate arrangements are made for the care of the children. In this connection, reference might be made to an excellent branch of Welfare Work in the provision of Day and Night Nurseries. Where these are provided, they seem to be made use of; and in the Glasgow district it is reported that the existing nurseries are taxed to the utmost limit of accommodation. Obviously, then, where a married woman, owing to the need for the daily care of her children, or to special care necessary during illness in her family, is being pulled in the two directions of home and factory, she is not likely to be so dependable.

When we consider sickness as the chief element in time lost through unavoidable causes, we can readily recognise what was frequently pointed out in the course of our investigation, that special circumstances operate in the case of women. Where women are employed in operating machines, on manual work of various kinds, and in labouring, it is only natural to find that they must absent themselves periodically for a morning, a day, or perhaps more. Sickness figures invariably account, for men as for women, for a great proportion of the total time lost. The proportion may often be greater than appears, for the imperfect records of time-keeping kept by many firms make it impossible to gauge the real amount of sickness. The introduction of women into many factories, and the consequent need for some welfare supervision, has, in the case of women, led to closer attention being paid to this matter. But it is not yet common for such welfare departments to keep a careful sickness register. In most factories it is recognised that a proportion of time lost through lateness, or generally what are classed as avoidable causes, may be due to ailments of a minor nature which the worker does not report. From the other side, there is no doubt truth in the opinion that, as indicated in the quotation above from Professor Loveday's memorandum, medical certificates may sometimes be given to workers on barely sufficient grounds.

Of the avoidable causes operative in the case of women, it is not always so easy to determine the nature. But it is clear that, along the lines of the distinction referred to above, time which is lost through causes wholly or largely unavoidable, may be classed as being avoidably lost. It is clear that feelings ranging from slackness, staleness, laziness, discontent, to actual physical indisposition of no very specific nature, may be responsible for an hour, a morning, or a day lost.

Reference has been made to the influence which overtime work may have upon timekeeping in normal hours. In the case of men, where the hours of overtime worked in any establishment are invariably higher than those for women, this influence may make itself felt in more ways than one. If overtime is excessive, or even considerable, it is an important predisposing cause to industrial fatigue, or what the worker might call "staleness." But overtime work within reasonable limits does not necessarily impair efficiency.

Where overtime pay is at a higher rate than that for work during normal hours, there is, as was observed more than once, a tendency for the latter to be sacrificed for the former. Of course, this tendency may be obviated by the management of a factory so far as overtime throughout the week is concerned. A man should not gain the advantage of working half his meal times at overtime rates if he has lost "avoidably" a morning quarter. While the question of overtime is, as already indicated, of greater importance in the case of men, account has to be taken of it in relation to women also. And indeed, apart from overtime and Sunday work, upon which many women are still employed largely in munition work,¹ more adequate account should be taken of the actual hours of work in relation to the nature of the work performed. Uniformity of hours for workers of both sexes, and for women engaged on work of completely different types, is not necessarily economical. One large 6-in. shell factory, which found it advantageous to work upon a two-shift system, has nevertheless instituted a three-shift system for the women operating the heavy machines for rough turning and boring.

In a factory visited during the week after Easter Monday, it was found that the number of women who had lost an hour or more on the Tuesday morning was considerable, and certainly much above the average. This has been found to be by no means an uncommon phenomenon. Professor Loveday refers to the same influence²—"the drag of the flesh against beginning the same old grind again"—as operating weekly on Mondays. From this point of view, he considers that Monday is the most economical full day for a holiday.

The fact that in many branches of work—particularly where employed in operating machines on shell work—women are capable of making high wages, has been referred to as an influence towards bad timekeeping, as certain women are satisfied after earning a certain amount. Such an influence no doubt does operate in

¹ In the chemicals and explosives trades, an average of at least 12 per cent. of the women employed were willing to work every Sunday from 22nd October, 1916, to 11th February, 1917, with the exception of the two Sundays nearest Christmas, 1916. In these trades, with the exception perhaps of some Government establishments, the largest percentage of women work on Sundays.

² Cd. 8511, 1917 (p. 58).

certain cases, though it would seem difficult to trace it; but against it must be put several influences operating in the opposite direction, not least of which may be reckoned the patriotic enthusiasm of the workers. Further, with regard to this point, information was obtained of the records of timekeeping for the time-workers and piece-workers in a 4·5-in. shell factory in Glasgow for the year 1916. The results as plotted in a graph show considerable differences between the two classes of workers at different points—due perhaps to special circumstances, such as shortage of material—but, taking the twelve months as a whole, there is no appreciable difference in the percentage of time lost.

The determination of the exact effect of the various causes enumerated is not possible, in view of the lack of information other than that obtained from opinions, authoritative enough in themselves, but insufficient for wider scientific purposes.

Brief reference might also be made to influences which make for good timekeeping, or remedies adopted to counteract bad timekeeping. Foremost among such influences should be mentioned Welfare Work, which has received such an impetus since the introduction of women into munition making and many branches of industry in which they were not previously employed, that it is commonly regarded as quite a new departure. Further reference will be made to this; but the importance of suitable canteen arrangements, of dressing-rooms, rest-rooms, lavatories, and of medical examination and supervision, is obvious. A reference has already been made to a firm which employed a female visitor to visit women who were off work. The knowledge which a female supervisor is able to acquire of the circumstances of the different women employed is an important element in successful management.

Some firms make special arrangements for the transport of their workers, thus preventing lateness through inadequate tram or train service.

Special timekeeping bonuses do not seem to be common, but in two firms in the Glasgow district where they were applied, they were said to have an excellent result. Where, too, payment of a special rate for overtime is dependent upon good timekeeping, somewhat the same influence is operative.

In addition to the above, most employers, in the case of women,

believe in the efficacy of a "word in season" to workers who are inclined to lose too much time.

6. SOURCES OF FEMALE LABOUR

Although women are employed in industrial and non-industrial occupations in such unprecedented numbers, certain firms, especially in certain industries, have been unable to obtain all the female labour they desire. Such shortage appears chiefly in those trades where women were formerly employed. For example, in the textile industries the shortage of female labour was for a time very considerable, but this shortage appears now (Sept., 1917) to be undergoing a check. In this trade, as in others of the same type, such as the clothing trades (where there is also a deficiency), where women were previously employed, the rates of pay compare unfavourably with what can be earned in munition work, or in other industries in work in replacement of men. For shell-making, and indeed for munition work generally, the supply of female labour seems to be sufficient to meet the demand. It is interesting to note in this connection that the estimated number of women employed on munition work and on other Government work in industry, in Government establishments, and in transport, was, in January, 1917, 988,000. The sources of supply drawn upon for satisfying the demand for female labour have been unmarried women who were not previously occupied in remunerative employment, married women of the same class, and married women with experience in some form of industrial or non-industrial employment. In this report, little account has been taken of Ireland, in which comparatively small scope has been afforded for the increased employment of women. But Ireland has proved another source for the supply of female labour, for many Irish women have crossed to Great Britain to take up employment in munition factories, attracted by the prospect of high wages. As will be seen from the report below,¹ the total number of those estimated as migrating from the Belfast district to England and Scotland is over a thousand. Probably the number exceeds this estimate, for, after a few have gone, many would follow, without seeking help from the Labour Exchange.

¹ Page 123.

Although many industries complain of shortage of female labour there is no reason to believe that the available supply of female labour is exhausted. On the contrary, there seems still to be a considerable reserve which ought theoretically to be drawn upon. But, unless compelled by actual need, women will not take employment where wages are low. Again, where there is shortage of labour in one district, where, however, wages are low, there is little likelihood of obtaining labour from another district. The fact, further, that new labour available is sometimes untrained is held to deter employers from engaging it.

With regard to the supply of female labour for any particular district, it is clear that as between districts in England there has been a considerable amount of transference of labour; but in Scotland it is reported that transferees between districts have in the main industrial areas been made within narrow geographical limits. There has been a considerable but relatively small influx of women from rural areas, but very little efflux of women from large towns except to areas within access by tram or by suburban trains. The workers in this case have continued to reside in the town from which they have been drawn. Part of such transference is due to the more natural demand for female labour in busy centres; another and very considerable part is due to the creation of huge new establishments in districts which were quite unable to supply the amount of labour required.

The special nature of the conditions under which women have been recruited for employment in munition work, the development in the provision of facilities for housing and for general welfare, and other influences operating with different power in different cases, account for a greatly increased mobility as far as women's labour is concerned. In an article on "The Migration of Women's Labour through the Employment Exchanges," in the *Board of Trade Labour Gazette* for March, 1917 (p. 92), it is stated that "during 1914 the number of women who obtained employment in other districts through the Employment Exchanges was 32,988; in 1915, the number increased to 53,096; and in 1916 to no less than 160,003." In some cases, the transference may not mean much if the woman's work is within travelling distance of her home, but the figures certainly indicate a distinct development in mobility. As instance of what has been done in drawing women

from non-industrial areas, or from areas in which the supply of suitable female labour is redundant, the following figures are given in the article referred to—

During the last month, 5,118 women from some 200 different exchange areas were brought into eight large munition centres alone. To one factory, for example, in the South of Scotland, 1,641 women were brought during this period from sixty-three different districts, including 228 from two Tyneside towns alone, 40 from Berwick, 55 from Inverness, and 9 from one small Fifeshire village. To another in the West Midlands, 772 women were imported from centres as far apart as Aberdeen and Penzance,

In addition to such transference as has taken place between districts, there has also been considerable transference between different trades. It is possible to get some idea of the nature of this, as also of the percentage of women drawn from homes. Figures are available showing the placing of six important Labour Exchanges—five in England and one in Scotland—during eight months ending the middle of September, 1916. The largest number of women were placed in the Metal Trades and in the Chemical Trades (including Explosives). Over the time specified, 11,415 women and girls were placed in the chemical trades, and 4,667 in the metal trades, in the six districts to which the figures refer. The percentage of the number drawn from other occupations was as shown in Table I (page 65) (unlike the figures in the previous tables, these refer to the work upon which the women were actually engaged, not to the work of the establishment in which they were employed).

With regard to these percentages, it needs to be noted that in one of the districts from which the figures are taken a large number of women were employed in the metal trades, even before the war; that women who gave up other occupations, or who left home to take up work in the manufacture of munitions prior to January, 1916, and who during the eight months—January to September, 1916—were placed again by the Labour Exchanges, appear as having been previously occupied with metal trades or chemical trades; that in the record of previous occupations, no account is taken of the time when the woman left such occupation—in one case, she may have been immediately transferred; in another, especially if the worker is married, a considerable time may have elapsed since she was previously employed in industry. The

percentages of those not previously occupied are amongst the most interesting, especially as in them there is least likelihood of error. For all the trades, the total number placed who had not been previously employed was 5,157, or 23 per cent. of the total.

TABLE I
(SOURCES)

Source of Female Labour.	Percentage of Total Number placed in <i>Chemical Trades (including Explosives)</i> (Total no. placed: 11,415).	Percentage of Total Number placed in <i>Metal Trades</i> (Total no. placed: 4,667).
Not previously occupied.	22.5	21.5
Domestic Service	20.5	12.6
Clothing Trades	12.8	5.2
Metal Trades	12.3	28.1
Chemical Trades	7.8	8.1
Textile Trades	5.1	4.9
Clerical Occupations & Local & Central Govt.	3.4	5.0
Shop Assistants and Waitresses	2.8	1.9
Paper and Printing Trades	2.1	1.8
Leather Trades	1.9	.9
Food and Tobacco Trades	1.8	1.0
China Trades.	1.5	—
Professional Occupations.	1.5	2.1
Rubber Trades	1.2	4.1
Wood Trades.	0.9	0.7
Agriculture	0.5	0.1
Other Occupations	1.4	2.0

In order to gain some idea of the source of the female labour now engaged in munition work, information was gathered with regard to 370 women engaged in operating machines in three shell factories, from which these numbers were chosen at random. The three factories are all in the Glasgow district. Of course, establishments in different parts of the same district, still more in different districts, recruit new labour under conditions which often vary considerably. For example, in the table given, the number drawn from the metal trades into shell factories is perhaps greater than it would otherwise be, because one of the factories is under

the management of a firm engaged in the metal trade, which has always employed a considerable number of women. It is reckoned that about 15 per cent. of the women employed as machinists in the shell factory have been transferred from other departments of the works. Reference was made above to this factory because of the fact that the proportion of married women employed as machinists is less than is usually found. The proportion of married or widowed women was found to be 10·5 per cent., whereas, in the other two factories (No. 2 and No. 3), it was 24·2 per cent. and 27·4 per cent. For the three factories for the samples chosen, the percentage of married women operatives is 20. It was indicated in the course of the investigation that the proportion of married women is probably greater than that shown, as a number of women may have got married in the course of their employment, without notifying the management, so that they still work under their maiden names. It was found that, amongst the labourers, in all the shell factories visited, a much higher proportion of women are married. In three munition factories in the Glasgow district from which information was obtained—two of them being factories No. 2 and No. 3 referred to above, the third being a projectile factory—of 76 female labourers employed, 89·5 per cent. are married. Of course, numbers of such women have been previously employed in some kind of work. The percentage of women noted as having been previously unoccupied in Table I (Sources) is very much the same for the factories investigated; and it is interesting to note how closely it approximates to the corresponding figures in Table I (Sources). The proportion of women of this class attracted to munition work is admittedly large, but the percentage in any factory will depend partly on the work, partly on the nature, or perhaps the situation, of the factory. For example, in a projectile factory in Glasgow, which has drawn most of its labour from the ranks of the lower middle class, the proportion of women previously unoccupied is very high. From amongst seventy women engaged in welding and on machine work, the percentage was found to be as high as 84·3. The percentage of women drawn from the clothing trades and the textile industries bears out the truth of the statements frequently made, that women have left what were normally regarded as women's industries to take up munition work. We have seen, too, how these very trades

TABLE II
(SOURCES)

Source of Female Labour Employed.	Civil Status and Number.	Total Numbers.	Percentage of each source to Total Number of Operatives (370).
Previously unoccupied	Single 39 Married 41 (or Widows)	80	21.6
Domestic Service	Single 52 Married 7	59	15.9
Clothing Trades & Textile Industries	Single 50 Married 3 (or Widows)	53	14.3
Shop Assistants and Waitresses . .	Single 41 Married 6	47	12.7
Metal Trades	Single 26 Married 4	30	8.1
Other Factory Hands & Machinists	Single 13 Married 4	17	4.5
Munition Work	Single 11 Married 4	15	4.1
Laundries	Single 9	9	2.4
Farming and Fish-curing . . .	Single 8	8	2.1
Chocolate Makers	Single 5 Married 2	7	1.8
Paper Trades, Printers, and Bookbinders	Single 6 Married 1	7	1.8
Clerical & Professional Occupations	Single 6	6	1.6
Packers and Checkers	Single 6	6	1.6
Tramway Workers	Single 2 Married 1	3	0.8
Shipbuilding	Single 3	3	0.8
Oilproofers	Single 3	3	0.8
Bottlers & Bottle Exchange Workers	Single 3	3	0.8
Sundry other occupations . . .	Single 13 Married 1	14	3.7

suffer at present from a shortage of female labour. From the record of Table II (p. 67), it may be said that 42 per cent. of the women employed had previous industrial experience.

7. INDUSTRIAL TRAINING

In much of the work which women have undertaken in industrial and non-industrial occupations, there has been little call for much training. For such work, women with no previous industrial experience can be enrolled. In some industries, however, women are kept at work which requires little skill to learn, when they might be trained, by one means or another, to undertake work of a higher order in the same factory. One of the chief influences which has militated against the introduction of women, in such industries, to the higher jobs is the temporary nature of their employment. Where men are to be reinstated after the war on skilled work, employers are unwilling to incur the expense of training women for such work. For instance, the work of cutting, in glovemaking, is regarded as highly skilled, and to this process, in accordance with a Trade Agreement, men at present serving with the Forces will go back after the war. For this reason, employers do not wish to train female labour when their employment will only be temporary. The same influence shows itself in the trades in which women have been normally employed, such as Clothing and Textiles, where a clear line of distinction has hitherto been drawn between men's and women's work. In Tailoring, for instance, from among the clothing trades, women were engaged, before the war, in most of the processes of the work, except in the cutting room, where men only were employed. Women have now been introduced to the cutting room to work which requires accuracy and skill. As is noted in the Leeds report, the firms themselves give the necessary training. But as they do not expect to retain the women in this department, they tend to keep them on one process, instead of taking them from one to another, as they do with the boys. Where Trade Unions, in view of the post-war conditions, and the redemption of promises made, do not favour very actively the training of women for certain work, employers hold back, unless the urgency of the situation forbids their doing so. In certain industries, too, such especially

as might be classed as, for war purposes, non-essential industries, though women might have been successfully and profitably introduced and trained, the uncertainty of the position of the trade during the war period has prevented this development.

In banking—an important non-industrial occupation, for work in which women have in large numbers offered themselves—as is evident from the reports of the Joint Stock Banks in Scotland, women are only employed on a temporary basis, since the men released for military service will be reinstated at the end of the war so far as possible. Consequently, they are given no great opportunity, nor, in the circumstances, do they generally seem to have any great inclination, to qualify themselves for the higher branches of banking work. The constitution of the Institute of Bankers in Scotland, which most apprentices in Scottish banks in normal times seek to join, does not at present permit women to sit for its examinations. The libraries of the Institute are, however, available for those who wish to study Banking theory; but, in the circumstances of their employment, it is not surprising that few women take advantage of such a privilege.

As has been already indicated, much of the work in the industrial training of women is undertaken by the firm employing them. This is especially favoured where the training involved will last only for a few days—as in the cutting operations in cloth finishing, referred to in the Leeds report on the Woollen and Worsted Trades, or in operating a machine in shell-making. Even when the training entails a few weeks' time rather than days, employers frequently favour having the women in their establishment from the first, considering that thereby they become more amenable to the general management and discipline of the factory. In many kinds of industrial work, of course, the most valuable training is experience. But in the factories, whether the training has been longer or shorter, it has been on an essentially practical basis, with the idea of making the woman a capable worker and wage-earner in the branch of work to which she has been put.

Such training in the factories is usually only possible with the sympathetic help and assistance of the skilled men of the trades. Such help has frequently been provided for in the terms of the trade agreements between the Trade Unions and employers referred to above. In the Hosiery Manufacturing and Finishing Trade,

the scope for the extension of female labour has been considerable. In the Home Office and Board of Trade pamphlet No. 8, with regard to this trade, the following paragraph appears—

In most of the processes, a period of training is found necessary before the new workers become of service. Several of the trade unions have made agreements with the employers to regulate the conditions under which skilled workmen shall train the women in the factories. The agreements provide for reasonable time wages, both for the women introduced, and the skilled men, during the period of training.

In some trades it has been possible to effect the training necessary while the women have been rendering useful service as assistants, under the supervision of skilled men.

This idea, of meeting the needs of the situation in the shortest possible time, is also behind all training for industrial employment given in technical colleges or institutions, or under the auspices of educational authorities or Government departments. The amount of such training is now very considerable. Reference was made last year to the training given at Leeds Technical School to women desirous of entering the Boot and Shoe Trade; and, with regard to this course, fuller information is given below in the Leeds report on the Boot and Shoe Industry. Training of this nature for shell work has been quite common throughout the country, and, although the need for such training is now not very great, it is worthy of note that the facilities provided attracted to munition work women who might not otherwise have entered a factory. Attention is being directed rather to a more advanced training to enable women to enter general engineering work. In Section VI in the Leeds report on Engineering, an account is given of the courses now available for women in the Leeds Technical School. In the Royal Technical College in Glasgow a more advanced type of training is also being given. As is the case with other institutions, it is working in conjunction with the Ministry of Munitions, which is providing such machines as horizontal and vertical drilling machines, turret lathes, planing and slotting machines, and various types of grinding machines. The fortnight period, which was regarded as sufficient for shell operators, has now, of course, to be considerably extended. At least six weeks' instruction is necessary to fit a woman for the particular type of work upon which she will be subsequently engaged. As far as possible, the attempt is now made to work

along with the firms who will employ the women. Such co-operation is especially useful, for the object of the training is not to produce all-round skill—an impossibility in short-period instruction of even the best kind—but rather to make the woman skilled in one direction. Women are consequently trained to one type of machine, which they become able to set up accurately as well as work. In the L.C.C. Training School at Clapham, which was visited, a firm which desired a few women, employees provided both machines and work, so that those under instruction might get what was for them the most practical training. It is found that those who gain most advantage from this more advanced training, and who are consequently of most use to the firms employing them, are women of good general education. One school, the Buckman School in London, is largely filled by girls from Scotland, who have satisfied certain requirements of the Scotch Education Department with regard to general education. The training in this school lasts from six to ten weeks, and during this time the girls are paid 25s. a week. They are, first of all, taught to appreciate what a thousandth of an inch means, and then their work is concentrated on milling machines, grinders, and lathes. Although in some colleges a certain amount of instruction is given by means of lectures, this is not common; and in view of the end which the training is regarded as serving, it is doubtful whether it is at all wise to try and fit lecture classes into an eight or ten weeks' course. As typical of another branch of munition work in which training is given, reference may be made to the fact that at the instigation of the Ministry of Munitions, a class has been formed at the Willesden Polytechnic for women workers in light woodwork for aeroplane components. The women are trained in the use of various tools, are taught to sharpen edged tools, and to set planes. The training lasts for a month, and the women work from 8.30 to 5.30 daily. During this month they receive a weekly allowance of 15s. It is proposed to extend the course by giving instruction in the use of woodworking machinery.

It is further interesting to note that the Ministry of Munitions, in order to help firms who wish to improve the efficiency of their women workers, or to increase their output, is prepared to lend the services of demonstrator-operatives. These women are experienced in such classes of work as machine operating, turning, drilling,

tool-setting or certain specific operations, bench-fitting, or oxy-acetylene welding. These women can be sent to a factory to demonstrate to the women what can be done. Along somewhat the same line, the Ministry of Munitions is prepared to supply a nucleus of women workers to any firm which experiences difficulty in making a start with women in a new shop, or on a new type of work. This nucleus of trained workers would be in the permanent employment of the firm.

8. WELFARE SUPERVISION AND WELFARE WORK

As is well known, in the latter part of last year, a number of French woman munition workers were conducted throughout this country in order that they might see the work done by the women in our factories and the conditions under which they worked. When the party had finished their tour, and were about to return to France, Madame Hamon voiced the feelings of all the Mission in these words—

We shall especially bear in mind your welfare work. Whilst producing the greatest possible quantity of munitions, and working with the utmost efficiency, you take great trouble to look after the health and general welfare of your workers. . . . In our Report to the Ministry of Munitions, we shall make special note of the welfare work in Britain. Our industrial life in France has been so much disorganised by the war that, even though peace should come soon, there will be much work for women to do for a long time to come. We feel it is most important that our people should copy, as far as possible, many of the good things you do to keep your women workers bright and happy, and to safeguard their health, which all make for the best work.

Welfare work has been brought prominently to the front by the rapid growth of munition factories, for which women have been recruited in such large numbers. Yet it is not wholly a new feature of industrial life. A certain amount of such work has been necessary under the Factory Acts, and it is well that legal obligation, rather than an employer's will or sympathy, should direct the provision for meeting the more pressing necessities for the physical well-being of men and women employees. But still more has frequently been accomplished at the instigation, or with the encouragement, of H.M. Inspectors of Factories. From the reports of such Inspectors dealing with the pre-war period, some idea can be obtained of the general nature of welfare work in

industry. For example, in the Report of the Chief Inspector of Factories for 1914,¹ we read—

The number of employers who look upon the payment of wages as a complete fulfilment of their responsibilities for the welfare of their operatives, is probably smaller than is generally thought, and the reports afford evidence of an increasing desire on the part of factory occupiers to improve the general conditions of their workers.

But within the past two years, the rapid growth of munition factories referred to, and the consequent employment of women under new conditions, has made necessary a careful study of all the influences which may affect, especially such as may affect adversely, industrial efficiency. Women have been transferred from one industry to another, or from one district to another, and facilities for housing become important; large new factories employing thousands of women have been created, and means for adequate transport must be considered; workers cannot go home during meal hours, and some provision has to be made for food; and in many other ways regard has to be paid to the circumstances under which the women work, so that an extension of welfare supervision has become imperative—not as something added to or outside ordinary factory management, but as an integral part of it; and to be recognised as such by all the factory. In all national factories, under order of the Minister of Munitions, there must be at least one Welfare Superintendent or Supervisor. Welfare supervision of an adequate nature is becoming increasingly common also in controlled establishments.

H.M. Principal Lady Inspector of Factories, in her Report for 1916, refers to the co-operation of her department with the Director of Welfare for Controlled Factories appointed by the Minister of Munitions, in a survey of the conditions in controlled establishments. Miss Anderson writes²—

The factories were classified for the guidance of the Director and his staff, as to degree of urgency of the call for his attention. An examination of these records shows that 31 per cent. of the factories we classified A, 49 per cent. B, and 20 per cent. C. It is well to grasp the point that B and C conditions meant, in varying combinations, partial or complete lack of mess-room accommodation or facilities for cooking food; inadequate or non-existent cloak-rooms and washing appliances, even for dirty and greasy occupations; lack of supply of

¹ Cd. 8051 of 1915 (p. 31). Cd. 8570 of 1917 (p. 9).

² Cd. 8570 of 1917 (p. 10).

seats; need of first-aid and rest rooms; supervision even of numerous young girls by men only, and other defects, in factories mostly working twelve-hour shifts, and reached often by considerable journeys from the workers' homes. Great progress has been made in 1916 in all these matters, . . . Undoubtedly a number of the factories classed B in 1916 have, during the year, qualified for Class A, and to a lesser extent this is true of Class C.

It is well-nigh impossible, in a short space, to give any adequate account of the different ways in which welfare work branches out. In most controlled establishments now, and in many others where women are employed, it is common to find a female welfare supervisor, or, where the numbers demand the attention of more than one, a Welfare Department. The extent to which the work of such a department may develop is, in large part, determined by the place given to the chief supervisor by the management of the firm. But now, even amongst the more conservative managers, it is becoming the custom to take this new development on its merits and, where it is found to give good results, to encourage it. When a woman enters a factory, she is interviewed by a welfare supervisor, and probably engaged, if suitable. If she has come from some distance, and requires accommodation, she will also be furnished with a list of suitable lodgings in the district. She is introduced into the factory, on her first appearance as an employee, by the supervisor, in whom she comes to recognise one who has an intelligent regard for her interests. Of course, it is clear that it is as important for success to have a capable and, in relation to the labour engaged, a suitable supervisor, as a sympathetic management.

Canteens are amongst the most common evidences of welfare work. They vary from rooms where facilities are given for the heating and eating of such food as the workers may bring with them, to well-equipped halls, within the factory bounds, where meals and refreshments may be obtained at a low cost. These more elaborate canteens are conducted on business lines. Sometimes the employer may be responsible for the management, sometimes he may give a contract to some caterer from outside, sometimes the arrangements may be directed by a committee of the workers, or by such a committee in co-operation with the management. Alongside the canteen a rest room is frequently to be found. Some type of ambulance room is another important

feature. Here a trained nurse may be in attendance to treat accidents and minor ailments. In small establishments, the supervisor is generally capable of discharging the duties of a first-aid nurse. These are some of the more prominent features of welfare work, although in many factories they are but a small part of what is done in the way of consideration for the urgent matters of the health and individual welfare of the women workers. In the promotion of shop discipline, in the investigation of complaints, in the accurate recording of time lost through different reasons, in special attention to cases of sickness or accident, in considering causes of any discontent, in giving advice with regard to recreation after work, and in being free of access to workers without any difficulty, the welfare supervisor for women has a large part to play. It may be noted that a firm may encourage, also, the promotion of social clubs, and clubs for athletics and sports; may arrange for free medical consultation during work hours; may provide for some pension scheme, in addition to that of the State; and may undertake a share in the work of evening educational classes. This work is perhaps most successful, and its importance for the future most powerful, when the workers in a factory set themselves to further their own welfare.

In the Factory Inspectors' Report for 1916, reference is made to a Workers' Welfare Committee found in a large national factory. On the committee are six men and seven women representatives of every branch of the workers. Funds to the amount of over £50 a week are raised by a levy of 3d. in the £ on wages earned.

No other collections are allowed in the factory, and regular subscriptions are made to local hospitals of various kinds, to convalescent homes, and dispensaries, as well as to prisoner-of-war funds; and grants are made in cases of distress in the factory. Newspapers are provided daily in the canteens. Concerts are arranged twice weekly in the dinner hour, the piano and music being purchased from the welfare fund.¹

■ In factories other than those engaged in the manufacture of munitions, welfare work has also developed considerably since the outbreak of war. By the Police, Factories, etc. (Miscellaneous Provisions) Act, passed in August, 1916, the Secretary of State for the Home Department is empowered to require by order in any factory or workshop, or in any class of factories or workshops,

¹ Cd. 8570 of 1917 (p. 10).

certain welfare provisions for the well-being of the workers. Thus the conditions of our munition factories seem likely to contribute much to the amenities of our normal industrial life. And acquaintance with intelligent welfare supervision and welfare work, robs the worker of his fear of some subtle attack upon his independence, and the manager of any idea that such activity is a useless extravagance. As Miss Anderson writes in her annual Report for 1915¹—

A question arises like the riddle of Samson, why has the manufacture of war on a terrible scale led at last to systematic introduction of hygienic safeguards that factory inspectors have advocated for many years, such as supervision by women in factories, provision of means of personal cleanliness, proper meal and rest rooms, and qualified nurses? Probably it is in part due to a recognition that wages alone cannot adequately reward those who serve the State in time of need, but it also points again to the new general awakening to the dependence of efficient output on the welfare of the human agent. "Out of the eater came forth meat, and out of the strong came forth sweetness."

9. THE WAGES OF WOMEN IN INDUSTRY

Since last year's report was published, various orders have been issued determining the remuneration of women engaged in work on munitions of war. Order No. 5, of 21st December, 1916, made by the Minister of Munitions (in pursuance of Section 6 of the Munitions of War (Amendment) Act of 1916), details directions with regard to the remuneration of women of 18 years of age or over, on munitions work of a class which prior to the war was customarily done by men. For a 48-hour week, or less, the time rate is 20s.; for a 54-hour week, 23s. On piece-work, the women are to be paid the same piece-work rates as the men. Where women are employed on a premium bonus system, the time allowed for the job shall be that customarily allowed to the men for the same job. On work which, prior to the war, was not recognised as men's work, the rates, controlled by Order No. 2 of 6th January, 1917, are 4½d. per hour for workers of 18 years and over. Order No. 7, of 16th April, 1917, has now taken the place of Order No. 5 referred to above. Under this Order, the time rate for a 48-hour week has been raised to 24s. and for a 54-hour week to 27s. Three sections of Order 6 of 24th January, 1917 (Secs. *b* (1), (2), and (3)),

¹ Cd. 8276 of 1916 (p. 15).

are important in so far as in them first appear the explicit directions that women employed on work customarily done by fully-skilled tradesmen, shall in all cases be paid, as from commencement, the time rates of the tradesmen whose work they undertake. These sections have frequently been referred to by employers in the course of the investigation, and seldom in favourable terms. In the Glasgow district, in engineering, under the terms of this agreement, women should make a minimum wage of about 46s. We learn, however, that there is no uniformity of practice as to the women's rate, and the matter is (September, 1917) still the subject of an unsettled dispute. The nominal minimum may be reduced somewhat if advantage is taken by the employers of the opportunity of deducting 10 per cent., but not more, to defray the expense of extra setting up, or skilled supervision. This expense, however, is subject to the approval of the Ministry of Munitions. But at least one case was met with in Glasgow, where women under this agreement could earn a bonus in addition to this minimum rate. In shell-making, so far as investigated, female operators can make good pay. In the Glasgow district, for shell machinists, it was found that the average rate of pay per week of normal time was about 50s. It has been clear that the high wages earned in shell-making are not due simply to the increase in the skill of the worker, but in large part to the improvements in the machines themselves, in the tuning-up of these machines, and in the management of a factory. In one 4.5-in. shell factory visited, records are kept of the work of individual workers on particular operations. From these a further record is compiled showing the minimum time taken on an operation, and the average time taken. If a particular worker's time for an operation is considerably above this average, a foreman or supervisor makes a special investigation, which may lead to the remedying of some defect, either in the worker's methods, or in the machine. The wages which women earn in shell-making vary considerably, and not so much, always, in relation to their skill as to the particular operation upon which they are placed, and this has caused some amount of dissatisfaction. Consequently, suggestions have been made for improvement by combining payment on a time rate, with a production bonus system. The levelling-up might also be satisfactorily accomplished by taking the present total cost of the

shell body as produced, and readjusting the payment for separate operations upon it, so as to result in the possibility of almost equivalent payment to the women operators.

The wages of shell machinists and of women engaged in those branches of industry where payment is made in accordance with Order Nos. 6 and 7, are the high-water mark of women's industrial payment. Although in other branches of munition making, wages are considerably lower, it seems clear that few women who were previously industrially employed, have made a financial loss by transferring to this new type of work.¹

In branches of industry other than those concerned with munitions, no sufficient investigation has been carried out to make possible a detailed record. In the Leeds report below, reference is made to wages in the woollen and worsted trades, where the rates for women replacing men are determined by a Trade Agreement. Reference is also made to the rates paid in the Boot and Shoe Trades, and in Tailoring. It is found to be a common stipulation in the trade agreements between Trade Unions and Employers' Associations, that women introduced shall be paid the same wage rates as men for equivalent work—a stipulation which, while accepted in the exigencies of the present time, is said, likewise, to be one of the surest safeguards of the position of the men after the war.

10. TRADE UNIONS AND THE EMPLOYMENT OF WOMEN AFTER THE WAR

Little need be added to the observations made on this branch of the enquiry last year. Although war conditions of employment may be said to have given an impetus to the organisation of women workers, and although in many cases male trade unionists are favourable to and seek to encourage such organisation, the difficulties in the way of much development in this line have not decreased greatly. In different centres, and with regard to different industries, it has been stated that women only join a union

¹ In a National High Explosives Factory in England, where the women's average weekly wage is at least 23s., out of 84 women previously employed, 2 earned 5s. or under; 5, more than 5s., and less than 7s. 6d.; 7, over 7s. 6d., but less than 10s.; 9, over 10s., but less than 12s. 6d.; 19, over 12s. 6d., but less than 15s.; 25, over 15s., but less than 17s. 6d.; 15, over 17s. 6d., but less than 20s.; and 2, 20s. or over.

when circumstances seem, from their own particular point of view, to make it advisable. When the crisis is over, they drop out of the organisation again. It is suggested that the women have not, in all but a few cases, learnt the lessons which effective united action can teach them. They are afraid to trust their own strength, believing it to be less than it is.

In Section IV of the General Notes appended to the Leeds report, it is recorded that all the secretaries of trade unions spoke of the instability of women as trade union members, attributing it to their instability as workers. It is said also that there is a good deal of prejudice against organisation among the women; that they think it not quite respectable, and are encouraged in this attitude by the men. They do not readily trust the trade union officials. It appears that when they do enter the unions they seldom care to take a prominent part in their organisation.

The National Federation of Women Workers, which, as recorded last year in the Glasgow Report on Engineering, had organised 3,000 women,¹ does not seem, from a report received, to have now exceeded that number for its total membership for Scotland. The organisers of this union are said to find the women indifferent, unless there is a prospect of an increase in wages, or danger of a decrease. In many cases, the National Federation of Women Workers has received the encouragement and assistance of officials of the Amalgamated Society of Engineers. Another trade union—the National Union of General Labourers—a mixed union, has approximately 11,000 women members in Scotland, about half of whom are engaged in the textile industries. This union reports no difficulty in retaining such members—a good testimony for a union not organised on an occupational basis. In the Clyde district a large number of women have been organised by the Workers' Union. It is very difficult, however, to get any satisfactory statistics as to these. The officials of the Union report great difficulty in organising married women, but single women are said to make enthusiastic trade unionists.

From the enquiries made, little can be directly added to the elucidation of the problems likely to arise after the war. The opinions of employers vary very widely, as do those of trade

¹ *Labour, Finance, and the War* (p. 131).

unionists themselves—variations due to the nature of the circumstances with which the individual is familiar, to his experience of female labour, to his attitude to the organisation of such labour, or to trade unionism generally, and to the amount of serious consideration given to the whole question. And through the medium of the Press, the public has been made aware of equally varied prophetic opinions, written from many points between the poles of pessimism and optimism.

But it seems to emerge from our investigations that replacement by women of skilled men has not been large. The great increase of women labour in the engineering trades, for instance, has been almost entirely due to shell-making, which involves working, for the most part, automatic or semi-automatic machinery. So far as the Clyde district is concerned, the degree of dilution of skilled men by women in the engineering and shipbuilding trades has so far been relatively low. Should the war end in 1918, the position of skilled artisans returning to those trades is, therefore, not likely to be seriously prejudiced by the competition of women workers; unless, in the meantime, repetition production is applied to non-war work on an unexampled scale and with unexampled rapidity. Competition in the engineering trades immediately after the war would, according to our investigations, appear to be much more likely to arise between women and unskilled and semi-skilled men than between women and skilled men. On the other hand, the large body of semi-skilled workers available will considerably strengthen the tendency, which had begun before the war, to introduce subdivision of processes and, consequently, the use of automatic machinery, and so ultimately the skilled man will be directly affected.

DETAILED REPORTS ON TRADES

LEEDS CENTRE

(Reports on Engineering, the Boot and Shoe Industry, Tailoring, Woollen and Worsted Trades, the Leather Industry, the Chemical Industries, and General Notes relative thereto.)

INFORMATION received from twenty-one engineering employers, three welfare supervisors; and from officials of the Gas and General Workers' Union, of the National Federation of Women Workers, and the Workers' Union. Eleven firms visited.

I. EXTENT OF SUBSTITUTION

Engineering has in the past employed a larger number of male workers than any other single industry in Leeds. Much adaptation of plant has taken place since the war began, and various engineering works have undertaken production of a nature foreign to them. In addition to work done by old-established firms, the Ministry of Munitions has established new works employing many thousands of women both within and without the city. In these works the proportion of women employed has rapidly increased. There is a certain amount of genuine replacement in engineering works, though it is often difficult to trace because of the subdivision of processes, the change in the character of the work, and alterations in the size of the firms.

Fifteen firms reported that 806 women had been taken on in the place of men, but it was evident that the women's work was frequently additional; it was also sometimes noted that a larger number of women than of men had to be employed to produce a given output, and that the processes had in very many cases been altered. In small firms where it is difficult to make the processes repetitive, substitution has been slow: out of twenty-six firms which reported that they had no substitution, seven gave as a reason that it was impossible to make the work repetitive in character.

II. SUCCESS OF REPLACEMENT

(a) *Output*.—Two firms out of 21 reported that the women's output was greater than that of the men on certain processes;

5 that it was equal to that of men; 3 that it was satisfactory; 1 that it was "fair"; 3 that the length of time for which women had been employed was too brief for any comparison to be made; 1 that the work was too different in character for comparison; and 6 that it was less than that of men: one noting that it was two-thirds of the men's output, but in this case it was mentioned that the work was of a very heavy nature; another that it was less because of the amount of spoilt work due to lack of training; and a third that the women tended to be afraid of the machines and, therefore, did not work so fast.

(b) *Quality*.—In only one case was it stated that the quality of the women's work was inferior to that of the men, and this was in the works mentioned above, in which the work was of exceptionally heavy and not of the usual machine shop routine.

(c) *Timekeeping*.—Fifteen employers reported on this point. Of these, 8 stated that the women were good timekeepers; one remarking that comparison with men was impossible because the men employed at present were not up to standard; another that the women excelled in this respect; and a third that they were infinitely better timekeepers than men. In 3 firms the women's timekeeping was said to be fair or moderate; in 4 it was said to be worse than that of men, one firm stating that it was lower by 21 per cent. In most cases in which the timekeeping was reported on unfavourably, the women's domestic duties were given as a reason, and the firms complaining of broken time were chiefly those employing a large proportion of married women.

In two cases it was stated that the women were rather frightened of the machines; but one manager felt this to be an advantage, because when something went wrong they called in a skilled man instead of meddling with the machine themselves as a boy would do. In most cases, it was stated that the women were less ambitious and did not care to get on; but there were exceptions to this, two firms reporting that the women were exceedingly keen and liked getting on to big machines and on to new work. All the firms with one exception reported that the women were more conscientious than the men: one manager said that "you did not catch them dodging"; another that "they didn't want to go and have games of football round the corner." Also they did not get tired of repetition work as soon as boys, and want to

go off to something else. This was connected with their lack of ambition.

III. WAGES

Practically all the firms doing engineering work are controlled and the minimum rates of pay fixed by the Ministry of Munitions, variations occurring with the amount that the women can earn on piece-work.

IV. TRADE UNION ORGANISATION

The organisation of women has received some impetus since the beginning of the war. The Amalgamated Society of Engineers recognises the National Federation of Women Workers as its women's section, and the Secretary of the Federation said that many members of the Amalgamated Society of Engineers urged the women to join the Federation. Most of the women who have joined the Federation are in one firm, and have joined recently.

The women's organiser of the National Union of General Workers was very hopeful about the women, and said they were coming in in large numbers. The men in the Union are extremely anxious that the women should come in, and almost force them to do so in some instances.

The membership of the Workers' Union does not appear to have been much affected by the war, the numbers of women being much what they were before.

It appears that an extremely small percentage of the women in engineering are organised at present. Women's labour in engineering is, for the most part, new in Leeds and extremely shifting, so that the difficulties of organising women in other industries are accentuated in the engineering trade.

The attitude of the men towards the organisation of women in engineering appears to be distinctly encouraging. It was interesting to find that one of the male officials of an important trade union considered that the introduction of women into the trade was an advantage, since the women were paid more than the boys whom they replaced and so were likely to pull up men's wages. On the whole, the attitude towards women's work is not favourable; but it is felt that if the women do enter the industry, it is as well for them to be organised.

The employers are sometimes in favour of organisation, believing that the greatest difficulties come from unorganised labour. In one firm the management definitely suggested to the women that they should have a woman organiser to speak to them, and offered them a room for the purpose.

V. CONDITIONS OF LABOUR

The hours vary greatly: the shifts are generally long, from 11 to 12 hours, with an hour off for dinner and half-an-hour for breakfast. Night work and Sunday work are not common outside the national shell factories. One firm employing women at night reported that the women worked $51\frac{1}{4}$ hours by day and 65 by night in alternate weeks. The most usual number of hours mentioned per week was 53 in factories employing women only in the day time.

Special arrangements for women are, for the most part, new, and have been made in some cases on a large scale and in a very excellent way. Welfare supervision has been introduced into many factories with good results, and the conditions are often admirable. But some few firms have hesitated to build specially for the women, since it has been felt that the women's work may be only temporary and that, therefore, makeshift arrangements are all that can be afforded. More and more of them, however, are feeling the need for good accommodation, and some firms which at first looked on the women's work as evanescent are contemplating the building of women's quarters.

Some firms provide a good many extras for their women employees (*e.g.*, in one firm, soup is given in the middle of the morning and tea at 4 p.m.; in another, Sanatogen, etc., may be ordered in large quantities for the girls if they seem to need it).

Canteens and mess-rooms are provided in most of the firms in which the women are working, the arrangements generally being extremely good.

VI. SPECIAL TRAINING

Courses of training for women have been instituted under the Leeds District Committee for training munition workers, and are carried on mainly in the Leeds Technical School. A free course of training in general engineering was begun in July, 1916, in the

Leeds Technical School and the University of Leeds. About a hundred students have finished their training and at least ninety have been satisfactorily placed. In January, 1917, a free course in Aeroplane Fuselage Construction was begun in the Technical School. It occupies seven hours a day for four weeks. The work consists either of (a) sheet-metal work, including marking-out, cutting, drilling, filing, fitting, and welding; and (b) machine operating, including turning, drilling, and milling; or (c) woodwork. Accurate measuring and gauging are also taught.

During the course, the Ministry of Munitions makes an allowance of 2s. a day towards learner's travelling expenses, etc. Three students of exceptional ability have been taken by the Ministry of Munitions for further training as tool-setters.

A special course in welding is also being given at the Technical School. By the end of March, five students had taken this course, and had obtained engagements as welders at a wage of 30s. a week.

In some firms a good deal of trouble is being taken to train the women instead of keeping them on purely repetition work. One firm which had attempted to put women on to fitting in early days had given up the attempt; it was reported that the women were useless at the work, which is generally done by a fully-trained engineer. In some other firms, however, the attempt has been made with success, and it seems to be merely a question of time whether the women can become as proficient as the men.

VII. POST-WAR

Opinions as to the position after the war were extremely varied. One employer connected with several large engineering shops, who was extremely enthusiastic about the women's work, said that it entirely depended on the women themselves. He believed that if the women chose to keep the place they had gained they were strong enough to do so, but that if they went quietly back to their homes nothing could be done about it. The general idea was that the women would wish to stay in the work, and that the men would wish to turn them out of it; though in some cases in which married women were mainly employed, it was thought that the women would be glad to leave the work. As a rule, the women seemed to prefer the engineering work to any they had been employed on before, especially those who had been tailoresses.

SOURCES OF WOMEN LABOUR

With regard to the sources of labour, one firm employing nearly 400 women reported that about 50 per cent. were married; two firms employing 68 women between them reported that a large proportion of the women were married, many being soldiers' wives, one of them definitely giving the preference to the latter. Five firms employing 324 women reported that 87 of them were married.

Particular information was obtained about the former occupations of 181 women as follows—

Tailoresses	39
Other Munitions, Engineering and Copper Workers	16
Charwomen	13
Domestic Servants	7
Laundresses	2
Weavers	8
Shop Assistants	6
Dressmakers and Milliners	4
Nail-makers	3
Workers in Cotton Mills, Printing Works, Sweet Factory, Paper Mill, Gas-mantle Factory, Boot Factory, and Lamp Works; Waterproof-makers, Lockmakers, Box-maker, Packer, Match-maker, Salvation Army captain, pianist in picture palace, member of travelling show	17
Living at home, unoccupied	66
Total	<u>181</u>

Other firms not giving exact details of the sources of women's labour reported that they had chiefly been tailoresses, weavers, domestic servants, or had been unoccupied.

The quantity of labour imported into Leeds is at present negligible. In many of the old-established works the women who have come in are relations of the men already there, and everything is done in a somewhat patriarchal fashion, the reference to the Labour Exchange being merely a matter of form.

FIRM A

Engaged on making the fore-part of shells. This work is new since the beginning of the war, the firm having been previously engaged in the manufacture of textile motor engines. The firm has increased in size during the war, and the proportion of women employed grows steadily.

	Men.	Women.	Percent- age of Women.
Jan., 1916. . . .	220	57	20.5
„ 1917. . . .	150	354	70.2
Apr., „	115	385	75

Throughout the works the amount of direct replacement has been small, most of the processes having been readjusted. On the automatic machines the women have replaced boys, and the management considers that the result has been a gain in quietness and discipline. On the drilling machines also they replace boys; the work is rather sensitive, and reckoned as semi-skilled. In the stores the replacement is direct, but one man with a knowledge of engineering is retained in the stores department.

The most interesting points about the women in these works is their employment as charge hands, as spare hands, and as tool-setters. When girls are employed as charge hands, they fall back on a skilled man in any real crisis, but they seem able to do a good deal themselves.

In one case a skilled man had been in charge of six drilling machines, which frequently went wrong. He went away, and a boy was put on to grind the drills and act as charge hand; the machines continued to go wrong, and the boy spent a good deal of time "larking." Finally, a girl of 15 was put on to the work, the machines went much better, her delicate finger-tips made her particularly good at grinding the fine drills; she was, of course, obliged to call in a skilled man if anything went seriously wrong with the machines.

The women who are learning tool-setting have been carefully selected; they were first made spare hands, passing from one machine to another as other workers stayed away; they have thus become semi-skilled, and it is hoped that they will soon be really skilled. The management prefers to get women who have never been on a machine before and train them from the beginning.

In some cases, the women have beaten the record completely. One employed on a four-spindle automatic machine has exceeded all previous records of output, and has been earning a bonus of 50s. a week on piece-work in addition to her minimum weekly wage. Others were earning a bonus of £2 2s.

Gaines, fuse bodies, and caps are made, and the women are employed as follows—

	Gaines.	Fuse Bodies.	Fuse Caps.	Total.
<i>Automatic Machines</i> . . .	10	6	6	= 22
<i>Capstan Lathes :</i>	—	—	—	
Boring	24	Stamping		
Taper Hole	14	Drilling		
Cap-recessing	6	8		
Cap-facing	12			
Machine-sizing	10			
Hand-tapping	14			
	80	20		= 100
Drilling	5	Drilling (minor vertical operation)	5	
Reamering (vertical machines). . . }	4	Thread milling	10	
Hand-sizing	11	Hand-tapping		
	—	3		
	20	33	15	= 68
Washing and Drying.	9			
Plating	4			
Stores	2	3 Stores	2	
Assembling }	4	Stamping, view-ing	3	
Packing	3	Pack-ing		
	22	6	5	= 33
Oil Extractors on Steel and Brass				
Cuttings		—	—	4
Cleaners	—	—	—	9
Spare Hands (2 on gaines, 2 on fuse bodies)	—	—	—	4
Setting-up.	—	—	—	3
Sizing	—	—	—	12
Gauging	—	—	—	130
Grand Total	—	—	—	395

FIRMS B AND C

Firms B and C are engaged on the manufacture of copper-bands. Firm B is an old-established locomotive works, which had not employed women for a century before the war. Soon after the war began it undertook the manufacture of heavy shells, and employed women on the various processes with great success. It has now abandoned shell-making and is again chiefly occupied with locomotive work.

There has been considerable opposition to the introduction of women to this work (though the number of workers has fallen considerably from about 2,000 before the war to 1,500 now); at the end of March only six women were employed on it. Of these, 2 were core-making, work for which their delicacy of touch was well-suited; 2 were on shaping machines (semi-skilled work); 1 was cutter-grinding; and the 6th, milling: the manager was well satisfied with all of them, especially the last one, and said that she made quite good attempts at setting the machine herself. A skilled man had formerly been engaged on her work.

Eighty-two other women are employed on work of making copper bands, work entirely foreign to this firm, carried on in a separate shed, with the women doing all the processes except for the employment of a few men as labourers and tool-setters.

In Firm C the original work was that of making lamp-fittings, etc.; and the work of making both shells and copper bands has been added to the old work. The firm has grown immensely. Before the war it employed 364 men and no women. It now employs—

Males under 18 years	66
„ 18 years and over	526
Females under 18 years	28
„ 18 years and over	296
	<hr/>
Total	916
	<hr/>

Of the 324 women employed, 284 are said to be acting as substitutes for men, but their work is obviously additional rather than substitutional. These 284 women are engaged in the following ways.

Tinning Department.	Oil-can and Lamp Fittings . . .	22
Scratching.	Shells	65
Greasing.	Shells and Copper Bands . . .	22
Pressing.	" "	28
Cutting-off Machines.	" "	55
Filing.	" "	53
Lathes.	" "	39

In Firm B, the women are also annealing.

In Firm B (in Feb., 1917), on copper-band making there was a minimum time-rate of 20s., many of the women receiving up to 35s. on piece-work.

In Firm C, in April, 1917, the wages began at 24s. a week, with a 5s. bonus plus time-and-a-quarter for night work. Charge hands get 28s. 6d., with a 5s. bonus plus time-and-a-half for night work.

FIRM D

This firm is engaged on munition work, and is divided into two factories, in one of which 3,000 women are engaged on cartridge filling; in the other and older factory, 100 women are directly replacing men in the ordinary engineering work. These 100 women are engaged on semi-skilled work for the most part on the following machines—

Capstan lathes	Drilling
Universal grinding	Turning
Wheel-cutting	also two copper workers and some gaugers

The women perform the easier operations on the skilled machines, which are set by a male fitter. It frequently only takes the women a week to become expert at the machines.

In February, 1917, the wages were 22s. 6d. for the first week. The women were then placed on piece-work; a quick worker could earn 30s. in the first week, and many rise to 45s. a week. These figures are practically the same as for men on similar work.

FIRM E

Firm E employs about 2,000 men, and has taken on seventy-eight women. It was originally engaged in the making of steam ploughs, and is now making shells. The greater number of the women are on automatic machines, fitting, turning; also felling, sawing, drilling, milling, and grinding. Four are working the

steam-hammer; others are twisting wires, slotting, and core-making. Others are turning and drilling in the brass shop.

The work is almost entirely repetitive; but in the brass shop, in the automatic turning of shell nozzles, the women set their own tools and perform all the processes themselves from start to finish. Many of the women are rapidly gaining experience, and the management has been putting them on to various different machines, so that they may be adaptable.

The wages are 25s. a week for time-workers, and piece-workers earn about the same. (Feb., 1917.)

FIRMS F AND G

This firm (F), employing about 1,500 men, has 78 women replacing men and 41 girls replacing boys. It is interesting as employing women on foundry work. Women are employed in the following departments—

(a) *Gill Room*.—(Making gills for the preparation of hemp, jute, flax, silk for weaving.)

Women (1) working in brass and wood; (2) hammering in nails by hand; (3) at grinding and drilling machines.

(b) *Fitting Department*.—Women boring and drilling.

(c) *Foundry*.—Women moulding.

(d) *Bolt Shop*.—Women making nails (automatic machines).

(e) *Joiners' Shop*.—Women varnishing; also hoist workers.

Firm G is engaged on shell work, and has two foundries, one of which has only male and the other only female workers on moulding. The managers of both F and G reported well of the women's work in moulding, which is unskilled but heavy, but both doubted whether the women could permanently stand the strain. The manager of this foundry in Firm G said that the women's work was quite as good as the men's; but he did not consider the continual lifting of baskets full of sand, weighing 52 lb., and placing them on the floor could be good for women.

In Firm G it was stated that it was a great advantage to employ women in the same shops as men, as it raised the tone.

FIRM H

This firm is making plant for munition works; it employs between 50 and 60 workers, and has taken on 9 women, one of whom is a store-keeper; the others are engaged on the following machines—

Small general lathe, shaping, rough-milling, planing.

The work of the shop is heavy and mainly skilled, but the women's work has been readjusted and made repetitive. Only the woman on the roughing lathe has completely taken the man's place, and even she does not set the machine. The store-keeper has to know the various tools and has responsible work; she has proved very efficient.

Time wages were 21s. 6d. in February, 1917; the men's rates were considerably higher, but the work was hardly comparable (except in the case of the work on the roughing lathe where the man had earned 38s.).

FIRM I

This firm is a small one, doing mechanical engineering, and has not undertaken any special war work. 140 men are employed and 31 women (only recently introduced). The women are employed as follows—

Cleaning and painting	3
Core-making (2 women and 7 girls in place of 2 men and 7 boys)	9
Brass turning (reckoned skilled work, but a man sets the tools).	4
Fitting	2
Moulding (men used to mould and cast, now the men cast and the women mould)	2
Iron turning (turning iron valve phlanges).	2
Fitting (this woman was on an iron-turning machine; she is now learning fitting)	1
Brass-finishing machines	6
Assembling (on bench)	2
Total	31

The woman fitter was a capable woman, but apt to be irregular: if she stayed away from the machine she threw out the whole work of the firm, so the management thought it best to put her on to fitting. She said, however, that she preferred the machine work.

The men were very ready to teach the women and to give up time to doing so, in which they might have been making larger earnings themselves on piece-work. They recognised that the work of the firm could not be carried on without the women.

The women on brass-turning were making (March, 1917) 22s. 6d. a week, with a bonus of 33½ if they kept time.

FIRMS J AND K

One of these firms has replaced 37 of its 300 male employees by women; the other, 11 out of 37. J is engaged on various kinds of work; K on making machines for the leather trade.

The women are employed as follows—

<i>Firm J</i>	<i>Firm K</i>
Milling	Drilling
Shaping	Boring
Screwing Lathes	Light Fitting
Turning	Turning
Grinding Machines	Planing
Painting and Sweeping-up	

It was noted in Firm K that the women had raised the whole tone of the shop. It was also said that the men preferred them to youths, and were more ready to teach them and help them.

BOOT AND SHOE INDUSTRY

LEEDS

(Information received from TWELVE firms and from Trade Union officials.)

I. EXTENT OF REPLACEMENT

Leeds being the centre of the heavy boot trade has undertaken a considerable amount of Army work; boots are made in the city not only for the British but also for the Russian and Italian troops.

Owing to the heavy nature of the work, women have been employed in the trade in smaller proportions than in other great boot-making centres (*e.g.*, the proportion of female employees in the industry in Leeds was 22 per cent. in 1911 as compared with 32 per cent. in Northamptonshire and 35 per cent. in Norwich).

In the past, women were chiefly employed in machining uppers; by agreement with the Union they were not admitted to the finishing department.

Since the beginning of 1916 they have been put on the various fresh processes, but the numbers so employed are small except where light shoes are made; and the introduction of women into the new departments is still in an experimental stage.

Where replacement has taken place, it has been direct and generally complete, each worker taking possession of a machine

doing one process, though in some cases the women receive help in the preparation of their work. The tool-setting is done by a skilled man.

In ten firms giving returns, it was reported that 114 women and girls were replacing men and boys; but 42 of these were in a firm making shoes for small children, and 25 in a firm making light boots and shoes for men and lads.

Firms making heavy boots reported that women were at work on the following processes for the first time—

<i>Upper Department</i>		
Working Clicking Presses	Blocking	Fitting up
<i>Bottom Stock Department</i>		
Rough Cutting	Channelling and Grooving	Fitting up
<i>Making Room</i>		
Sole Tacking	Rotary Stitching	
Loose Nailing	Cutlan Nailing	
<i>Heeling Department</i>		
Heel Building	Heel Nailing	
Heel Compressing	Heeling	
<i>Finishing Room</i>		
Edge-setting	Inking	Scouring
Burnishing	Polishing	Painting

In firms making lighter goods, they are also doing every process connected with making bottoms and blake sewing, levelling, trimming, edge-paring, and top-ironing.

The industry, as a whole, is employing a smaller number of workers than before; the *Board of Trade Labour Gazette* reported that firms making returns were employing 1,948 workers in April, 1917, as compared with 2,238 in April, 1914. The total number of women employed seems to have increased in spite of the fact that it has been difficult to keep them in the old work of machining uppers. It was estimated that the number of women in the boot trade in Leeds in December, 1916, had increased by 150 as compared with the numbers employed in July, 1914.

Four firms giving information on this point report as follows—

Firm.	MEN.			WOMEN.			
	Employed before War.	Employed now.	Increase(+) or Decrease (-).	Employed before War.	Employed now.	Taking Place of Men.	Decrease (-) or Increase (+)
A	90	58	- 32	44	34	3	- 10
B	92	74	- 18	56	79	No. not given	+ 23
C	175	107	- 68	110	119	15	+ 9
D	124	96	- 28	83	98	25	+ 15

II. SUCCESS OF REPLACEMENT

I. Output.—*Twelve firms.* (a) Less than that of men: 7 firms.

(b) Equal to that of men: 2 firms.

(c) Better than that of men on some processes: 3 firms.

(a) One firm reported that the output was diminished by half when women undertook the work of men.

Four drew attention to the fact that the women were new to the work, and two of these expressed the opinion that in time the women's output would be as great as that of the men.

(b) One of these firms was making light goods.

(c) One firm was making light goods, but the others were making heavy boots. One manager reported that a girl on a loose-nailing machine at which the man she replaced had never earned more than 30s. a week, earned 18s. the first week, 26s. the second, 34s. the third, and finally got up to 40s. a week—a rate she maintained as long as she was on the work. She was paid the same piece-rate as the man (4d. a doz.).

II. Quality.—Inferior in 4 cases out of the 12. Satisfactory in 8 cases. The firm making children's shoes said that the women were better than the men in the finishing processes, which required deftness and neatness.

III. Timekeeping.—Satisfactory in only one case. One firm, which reported well of the women's work in every other respect, said that it was necessary to take on three women in the place of two men merely because the women could not be relied on to come regularly and punctually. One employer said that, although one woman had done admirably at her work, she was so erratic about

coming, that the foreman had been glad to do without her and undertake her work in his odd moments.

III. WAGES

According to the resolution of the Leeds Arbitration Board, women are paid a minimum rate of 17s. for the first month, after that they work at an agreed rate on piece-work; if the employer and the Trade Union official fail to agree on a piece-rate, the female operative receives the male operative's minimum of 32s. until an agreement is arrived at. The women are only admitted to the finishing department on the condition of their being paid the same rate as the men.

It is common to find the women earning from 35s. to 40s. a week.

IV. TRADE UNION ORGANISATION

(a) Women are admitted to the Boot and Shoe Operatives' Union. They pay half fees and receive half benefits. About 50 per cent. of the female and 80 per cent. of the male operatives are in the Union.

(b) It is extremely difficult to get the women to join and take an active interest in the Union, since their work is not of permanent interest to them.

(c) The men workers appear to wish the women to join the Union.

The Union has taken an active part in facilitating the replacement of men by women. Some of the employers spoke with enthusiasm of the help given by the Union.

The hours are generally 52½ per week.

V. CONDITIONS OF WOMEN'S WORK

Conditions of air and light vary considerably, as some of the works are very old; some of them have mess-rooms; and in the more up-to-date firms canteens are already being devised.

Special arrangements have always been made for women, as a certain number have been employed in all the works in the past, so their introduction to new processes has not necessitated new accommodation.

A good many firms remarked that the women were apt to get ill after a time and so were obliged to give up the work, even when they had been doing it extremely well.

It seems that this is to be attributed to the nature and not to the conditions of the work. Almost all the new work entails standing; muscles formerly unused have to be employed; and the work is frequently heavy on the legs as well as the arms (*e.g.*, on the cutlan nailing machines, on which a good many women are working). One firm employed in making light boots and shoes reported that there was no difficulty about the women getting ill: many of them had been on the work for a long time, and had not lost a day through illness; but it should be noted that this firm is not only turning out light work, but is very modern; further, the management is strict about timekeeping and will not retain workers who are unpunctual, and also avoids the employment of married women as far as possible. The good health of the women is, therefore, probably due to a process of selection and to good conditions, as well as to light work.

VI

In January, 1916, a free course of training for women was begun at the Technical School by arrangement of the Leeds Education Committee. A hundred students have taken the course, and between seventy-five and eighty obtained permanent employment after taking it.

The Leeds Arbitration Board decided that all females should be initiated at the Technical School for the Clicking, Rough Cutting, Making, Finishing, and Closing Departments. Instruction is given in the following processes—

1. *Clicking*.—Cutting out joined facings, topbands, etc.; linen and leather linings, glacé kid, box-hide, finishing the course on semi-chrome leather.

2. *Closing*.—Making linings, seaming, backstrapping, etc.: the most efficient students being able to put on the goloshes by the end of the course.

3. *Sewing and Stitching*.—Channelling, tacking on with wire grip or staple tackers; Blake sewing, sole-stitching, channel-closing, bottom-levelling; slugging. The students are taught to do their own minor adjustments.

4. *Heel-attaching*.

5. *Finishing*.—Heel-scouring, bottom scouring, painting; seat-wheeling, bottom padding, finishing off. Most of the women on

new operations have been at the Technical School, one employer having paid his workers during their course there.

VII. POST-WAR

Both employers and Trade Union officials agreed in thinking, that if the women could do the work satisfactorily, there was no reason against their remaining in the new work, provided that they were paid the same wage as men doing similar work. The Trade Union officials thought that if this condition were maintained, men would certainly be employed again instead of women; some of the employers, however, thought that the women might prove that they could do the work as well as men, though in the heavy trade it seems doubtful whether they will be able to stand the strain permanently.

It is largely a question of whether they can develop the requisite muscles.

The Trade Union officials did not think that the women cared for the work much. In several cases the employers said that the women had left to go on to munitions work. The Head of the Technical School also observed that munitions work appeared more attractive to the women, and that the training given for work in aeroplane factories is being taken up far more eagerly, although the wages to be obtained are no better than in the boot trade. Hardly any pupils are now coming forward for the latter.

It is noticeable in the boot industry that the women put on the new processes are not, as a rule, taken from the departments in which women have formerly been employed, but are brought in from outside. Those trained at the Technical School were drawn from every conceivable source, a fair number having been previously unoccupied and a good many more having been domestic servants.

In most firms, a considerable proportion of the women were married; the firm employing forty-two women definitely preferred young married women as being steadier and more responsible. On the other hand, as already noted, the firm with the next largest amount of replacement avoided married women.

(The figures are too small, and the introduction of women too new, for generalisation.)

TAILORING

(LEEDS)

(Information received from officials of the Employers' Federation, of the United Garment Workers, and of the Amalgamated Society of Tailors and Tailoresses. Also from 21 firms, 6 of which were visited.)

I. EXTENT OF REPLACEMENT

Leeds has a greater tailoring trade than any other city in the country, with the exception of London, and this industry employs far more women than any other in Leeds. It does not offer much scope for substitution except in the cutting-room, though the Census of 1911 showed that the proportion of women engaged in the industry in Leeds was not so great as in some other districts, being 63 per cent. of the total as compared with 70 per cent. and more in Bristol, Plymouth, Walsall, and Wigan.

This is no doubt partly due to the existence of some Jewish factories in Leeds, in which the machining is for the most part done by men and not by women. Throughout the country wherever there are many Jewish factories, the female proportion of tailoring employees is comparatively small: in London, for instance, it was only 48 per cent. in 1911.

This would appear to give greater opportunity for substitution in the Jewish factories. The Jewish tailors have left Leeds in large numbers since the war began, many of them having enlisted. The number of tailors in the Jewish branches of the United Garment Workers' Union was about 2,200 in July, 1914, and is now less than 1,000; it is estimated that about 95 per cent. of the Jewish tailors are members of the Union. But, owing to the peculiar nature of the Jewish trade, there has not been much substitution. In the past, the better class of coats has been made in the Jewish factories, other factories sending the coats to be made by them while retaining the vests and trousers. Since the war, the demand for these coats has not been so great; and though it has been replaced by a demand for khaki, the factories receiving orders for khaki have largely made the coats themselves. So the decline in the number of the Jewish tailors has been accompanied by a decline in the kind of work they were accustomed to do, though

they have proved themselves very adaptable in taking up other work.

Replacement, then, has mainly been in the non-Jewish factories in the cutting-room, where the women are employed in cutting (though not with the band-knife) on trimming and fitting up. In several cases it was reported that women were newly employed in passing (*i.e.*, examining the work at various stages) and in folding. Pressing is a process which has always been done by women in some factories, but in others it has been considered unsuitable for women, especially when very heavy presses are used; many women are said to be replacing men on this process and, in at least one instance, lighter presses have been introduced to enable the women to do the work. A small number of women have taken the places of foremen.

Eighteen firms reported that 217 women had replaced men. Of these, 24 are clerks, and at least 15 are employed in the warehouse.

One large and typical firm with about 2,000 female and 500 male workers (200 of the latter being adults and 300 being boys) reported that 45 women had taken men's places in the following departments:

Clerks in Counting House.	3	<i>Despatch Department</i>	
Assistants in Stock Rooms	9	Invoice Clerk	1
<i>Woollen Room</i>		<i>Factory</i>	
Cutting patterns off cloth, etc.	1	Paring (<i>i.e.</i> , trimming edges).	3
Clerking	1	Passing work from finishers	3
Buying and " matching up "	1	Passing—work from baisters.	3
<i>Cutting Room</i>		Passing—completed garments	2
Clerking	2	Fitting up—cutting pocket-	
Laying patterns on canvas and		mouths, etc.	1
preparing it for knife machine	3	Passing machined work	2
Matching lining with cloth and		Tailoring collars	1
measuring amount to be used	8		
Rubbing chalk through perfor-			
ated patterns on to cloth;			
marking machine	1		

In this factory the women are largely replacing lads who would have been doing the various processes in the course of learning the trade (*e.g.*, in the case of the 8 women matching and measuring linings in the cutting-room).

In another large firm employing 880 workers, 79 women are replacing men: 44 in cutting, a process on which only 21 men remain; 27 in pressing, on which only 12 men are still engaged;

and 8 are replacing men as clerks. In this factory the substitution was said to be direct and complete: though in other firms it was stated that the women could not lift the cloth, so that the work had to be subdivided, men being employed to do the heavy work.

It has been difficult to keep up a sufficient supply of workers in the industry. The *Board of Trade Labour Gazette* of April, 1917, stated that firms in Leeds giving returns were employing 6,786 workpeople in the wholesale bespoke and ready-made branch, as compared with 10,226 in April, 1914.

The following particulars were received from nine firms, and show hardly any diminution in the total numbers employed—

Firm.	MEN.			WOMEN.			Increase(+) or Decrease (-).
	Employed before War.	Employed now.	Increase(+) or Decrease (-).	Employed before War.	Employed now.	Taking Place of Men.	
A	91	51	- 40	393	303	13	- 90
B	56	21	- 35	180	156	10	- 24
C	16	8	- 8	44	31	4	- 13
D	12	5	- 7	0	2	2	+ 2
E	29	13	- 16	0	18	No. not given	+ 18
F	30	12	- 18	50	100	" "	+ 50
G	63	41	- 22	136	194	" "	+ 58
H	30	25	- 5	95	150	6	+ 55
I	65	92	+ 27	59	122	No. not given	+ 63

Some other firms which had no substitution noted that they had been unable to get women to do their ordinary work quite apart from being able to get them for new processes; one remarked that it was easy to get women to undertake new processes, but that it was impossible to keep up the supply of machinists. One firm stated that the work of all departments had been diminished by about half, another that the output of the cutting department had been enormously reduced—in both cases because of the difficulty of obtaining workers.

There has been some difficulty in substituting women for men in the cutting-room, this work having been considered to be men's work only by the Union. The workers in one firm struck in 1915

because of the introduction of women into this department; but an agreement was arrived at in May, 1916, between the Wholesale Clothing Manufacturers' Federation and the Amalgamated Union of Clothiers' Operatives by which women were admitted to the department on certain conditions. Still the difficulties encountered in earlier days have kept some employers from acting on this agreement; some have endeavoured to substitute lads under or men over military age rather than women for men in the cutting-room. One employer definitely stated that he had not put women on to cutting because the Union had at one time objected. In one or two instances, it was said that the work was too heavy for women.

II. SUCCESS OF REPLACEMENT

A. Output.—The women's output as compared with that of men varies according to the processes they have undertaken. Fourteen employers out of 21 reported that their output was less than that of the men they replaced: of these, two stated that the output was considerably less; one that a woman's output was two-thirds that of a man; another that it was two-thirds that of a man in fitting up and in the stockroom, and that it might in time become half that of a man in cutting. Another firm stated that the award of the Board of Trade making it necessary to pay an inexperienced woman two-thirds of the wage of an experienced man made women's labour a prohibitive price. Many of the firms attributed the diminished output to lack of training and said that no doubt it would increase in time.

Eight firms reported well of the women's output; and it was noticeable that the firm employing 44 women cutters reported most favourably of their work, saying that 19 of them were superior to any men, quicker, defter, and more reliable, while the others were up to the men's average. The 27 women pressers also received high praise. In this firm the women had been on the work for nearly two years and so had become proficient.

B. Quality.—With regard to the quality of the women's work, only 6 firms out of 21 reported that it was inferior to that of the men; two others said that the quality was fair. All the others spoke highly of it. In two cases it was stated that the women were defter than the men in the cutting-room; and two firms spoke

well of women pressers, saying that they were able to give more attention to detail than the men.

The work at which they are not considered so good as men in the clothing trade is that of supervision. It is customary to employ foremen; and in the only cases in which forewomen had been substituted, four in all, the management reported that the arrangement was unsatisfactory. It is difficult to account for this, as in the boot trade, for instance, women are said to be better than men in the same position.

C. Timekeeping.—Eight firms reported that the women kept good time, as good as men or boys; three, that their timekeeping was fair; ten, that it was bad and inferior to that of men. The unpunctuality was in almost every case attributed to the women's domestic duties.

One manager in a large works said that the women not only came late, but frequently stayed away altogether; he attributed this not only to their domestic duties, but to their greater susceptibility to cold, etc. He said that, before the war, out of 1,800 women, 300 were sometimes absent, but that since the war the women had been much more regular and had, he thought, worked better altogether.

It was generally said that the women did not take their work so seriously as men, and that they lacked ambition. But one manager said that in the case of two girls who were better educated than most, real initiative had been shown, and the girls had attacked the work with a will and shown themselves equal to any men.

III. WAGES

By the agreement between the manufacturers and operatives in 1916, it was arranged that women on piece-work should receive the same rates of pay as the men; a clause introduced by the Tailoring Trade Board determined the time rates, namely, 4d. an hour for girls under 19, 5½d. for those between 19 and 20, 6d. for those of 20 and over: these rates apply to females employed in the Cutting, Trimming, and Fitting-up Departments. Several firms stated that the substitution was very expensive, as boys in the cutting-room who were merely learners would take a wage far lower than those paid to the women under the Board of Trade regulations.

IV. TRADE UNION ORGANISATION

Trade Union organisation is not very strong in the clothing trade, and is much weaker among the women than the men. It is reckoned that about 45 per cent. of the men are organised, and the highest estimate given of the women was that 15 per cent. were in trade unions. They are chiefly in the United Garment Workers' Union; but recently a women's branch of the older Union of the Amalgamated Society of Tailors and Tailoresses has been opened in Leeds, the members of which now number about 200.

The usual difficulty in organising the women exists in this industry, namely, that they leave their work on marrying, and so there is no stable element to carry on or care for the trade union. It was said by the officials that the women only came into the Union when they were in difficulties; when the crisis was over, they dropped out of the organisation.

V. CONDITIONS

Hours are generally from 8 a.m. to 6 p.m., with an hour off for dinner.

As women have always been employed in the industry in large numbers, the necessary accommodation has been in existence for some time. One of the largest clothing factories in the city has introduced a Welfare worker during the last few months, and it seems that there is a movement towards the provision of an increasingly high standard of comfort in the factories.

It was reckoned in December, 1916, that 8 per cent. of the women working in the industry were in factories which provided canteens and messrooms, 57 per cent. in factories providing messrooms only, and 34 per cent. in factories providing neither.

VI. TRAINING

As noted above, it is considered that it takes at least a year to make women proficient in the cutting-room. The firms give such training as there is; but as they do not expect to retain the women in this department, they tend to keep them on one process instead of taking them from one to another as they do with the boys.

VII. POST-WAR

The agreement between the manufacturers and the operatives insists that the employers shall revert to the conditions prevailing in their workshops and factories before the war in regard to men's employment, and that they shall reinstate all men who shall have left to join the Colours either during the continuance or within a reasonable time after the conclusion of the present war.

In the factories visited, the employers are expecting to replace men at the end of the war in the cutting-room. In the firm in which lighter presses have been introduced in order to suit the women, the employer doubts whether he can afford to put men on to pressing again.

In the firm which has introduced seventy-nine women in the place of men, all the women have come from within the firm, and are under agreement to return to their pre-war work when the men come back.

In the firm employing forty-five women in the place of men, the management had undertaken to reinstate all the men who have left, and is spending several thousands a year in payments to them while on service; in this case the women have largely been taken on from outside; they have been clearly given to understand that they will not be needed when the men return. Another firm which had introduced twelve women to the cutting-room seems to anticipate no difficulty; the manager thinks the women prefer the machining work from which they have largely been taken, though a few have been introduced from outside. The opposite view was held in another firm which has taken all its female workers for new processes from within; the manager considers that the women, having proved themselves as good as or better than the men at the new work, will wish to remain in it, while the men will wish them to give it up.

WOOLLEN AND WORSTED TRADES

(LEEDS)

(Information received from officials of the Leeds Woollen and Worsted Manufacturers' Association and the General Union of Textile Workers; from 18 employers, 7 of whose works were visited; and from the Welfare-worker in a worsted spinning-mill.)

I. EXTENT OF REPLACEMENT

There is little scope for substitution in the Leeds area, in which women have always been employed to an exceptionally large extent. In 1911, 65 per cent. of the employees in these trades in Leeds were women, as compared with 51 per cent. throughout the West Riding. In the Bradford district, a larger amount of substitution has been possible, because of the great number of wool-combing machines in use which are kept at work both night and day; the General Order of 23rd October, 1916, allowing the employment of women at night has led to their introduction in considerable numbers. But in the Leeds firms, which are chiefly engaged in manufacturing various kinds of woven goods, there is little room for substitution.

Twelve firms reported that the bulk of their employees were women, and that the few men they employed were doing work which was too heavy for women. One of these firms stated that it was impossible to get enough women to do the work ordinarily done by them.

There are, however, a certain number of firms in the district which confine themselves to the work of cloth-finishing. It has not been usual to employ women on cloth-finishing processes; and though they are now so employed by some firms, the substitution has been slow and has generally taken place in firms where women have already been engaged on other processes and which, therefore, have the necessary accommodation.

Forty-two firms out of sixty-one giving returns, stated that they had no substitution, except that ten had introduced women into their offices. Eighteen firms reported that 150 women had been substituted for men; in eight cases not more than three women were taking men's places, and in no case was the number of women replacing men more than twenty-two. In several cases, the

substitution has meant that women have been put in increased numbers on to work in which it had always been customary to employ them (*e.g.*, weaving, warping, piecing, filling, scribbling machines), though the employment of female warpers was new to some firms of woollen manufacturers.

In a firm engaged in worsted-spinning, women were found taking the place of boys as improvers and the place of men as overlookers.

In firms manufacturing woollen goods and finishing cloth, women have replaced men on the following processes new to them—

Blending	Minding cutting machines
Waste-cleaning	Working steam rotary presses
Minding rag-grinding machines	Perching
Willeying	Steaming
Twisting-in	Cuttling
Distributing bobbins	Packing
Milling	
Raising	
Tentering (assisting only)	

Two firms reported that they had always employed women on perching; but in most cases this work was new to them; and it was one of the processes mentioned in the General Agreement of February, 1916, as previously done by men, but suitable for women.

It seems possible that where light bales are handled, substitution may go much further in cloth finishing. One employer in a firm engaged exclusively in cloth finishing, who had been employing men only at the beginning of the war, considered that 70 per cent. of the work in his mills could be done by women, though at present he only employed three. The bales handled in his works are comparatively light, from 20–60 lb. He thought women could not handle the really heavy bales, though it might be possible to use trolleys advantageously in some instances.

It has been difficult to keep up the supply of labour in these trades. The *Board of Trade Labour Gazette* reports that in firms giving returns there were 2,032 employees in April, 1917, in the woollen trade in the Leeds district as compared with 2,480 in April, 1914. There is a large Army demand for the products, but some machinery stands idle for lack of operatives. It was estimated in December, 1916, that there were fifty-three more women employed in the woollen and worsted trade than in July, 1914.

Firms giving returns as to the numbers employed now and before the war report as follows,

Firm.	MEN.			WOMEN.			
	Employed before War.	Employed now.	Increase(+) or Decrease (-).	Employed before War.	Employed now.	Taking Place of Men.	Increase(+) or Decrease (-).
A	151	157	+ 6	212	236	13	+ 24
B	61	78	+ 17	128	175	21	+ 47
C	40	38	- 2	60	72	1	+ 12
D	10	2	- 8	90	98	8	+ 8
E	12	10	- 2	45	42	1	- 3
F	93	65	- 28	69	74	No. not given	+ 5
G	70	43	- 27	106	125	13	+ 19
H	94	89	- 5	192	169	2	- 23
I	250	100	- 150	800	600	12	- 200

Three firms without any substitution (except in office work)—

110	92	- 18	249	243	2	- 6
-----	----	------	-----	-----	---	-----

Six firms not previously employing women and now only in office work—

113	97	- 16	0	4	4	+ 4
-----	----	------	---	---	---	-----

Firm A is engaged in worsted spinning.

Firm I engaged in woollen manufacture gave the difficulty of getting labour as the reason for the great decrease in the number of workers employed.

II. SUCCESS OF REPLACEMENT

The success of the replacement depends largely on the processes on which the women are engaged.

A. Output.—Two firms out of seventeen reported that the women's output was less than that of the men; another that, in warping, three women were equal to two men; another, that the output was less only in the blending room; a fifth, that in the more laborious processes, five women were needed to replace four men, but that in other processes their output was as great. Seven firms reported that the women's output was good; two others, that it was as good as that of the men, but that the women needed help in lifting heavy goods, in steaming and folding, and in working the scribbling machines,

Three firms reported that the women's output was equal to that of the men they replaced.

B. Quality.—In the worsted spinning, one woman overlooker was said to be equal to any man ever employed on that particular work in the Twisting Department. It is highly skilled, and involves clerical work and accounts. But the replacement in overlooking is not quite complete, as there are heavy wheels and bands with which a woman cannot deal, so a man is retained to do the heavy work in each department in which a woman overlooker is employed. The other women overlookers were less good.

In woollen manufacture, the quality of the women's work was said to be as good as that of men in every case; and where the work needed detailed attention as in the case of perching, it was stated that the women were better than the men, and that fewer complaints were received as to the quality of the work. They were also said to be more conscientious.

C. Timekeeping.—Figures of timekeeping were received only from the worsted spinning mill (*see* General Notes). In woollen manufacture, sixteen firms reported well of the women, one saying that they kept better time than the men.

The reports on women's work in woollen manufacture were exceptionally good. One employer said that they were as keen as the men, that there was no malingering among them, and that they were more conscientious. Another that the men who were working with them at milling found them better to work with than other men. Another that they were more willing and readier to undertake work than men.

In only one case has the attempt to employ a woman been a complete failure. That was in the dyeing house. She had courageously kept to the work as long as possible, but the extreme cold in the dyeing house was too much for her, and she had to give it up; the cold to the feet is peculiarly trying.

III. WAGES

According to the General Agreement of February, 1916, arrived at by the Conference of Representatives of Employees and Operatives' Associations in the Woollen and Worsted Industry at the instance of the Home Office, it was decided (*a*) that piece rates for women should be the same as for men, unless women's rates

had been previously established; (b) that at time rates, women should be paid rates equal to those of men for an equivalent quantity of work, and in any case not less than four-fifths of the rate formerly paid to the men they replace; (c) that these rates, if a larger number of women should be needed to replace a smaller number of men, the aggregate wage of the women should equal the aggregate wage of the men.

In cases in which the women do not earn as much as the men they replace, it is because their output is not so great.

IV. TRADE UNION ORGANISATION

The General Union of Textile Workers admits women, and considerable numbers of them are organised in the woollen and worsted trades, but the difficulties of organising them in these trades are as great as in other Yorkshire industries.

V. CONDITIONS OF LABOUR

In most instances the hours are from 6 a.m. to 5.30 p.m., with $1\frac{1}{2}$ hours off for meals, stopping at 12 on Saturdays and no Sunday work (*i.e.*, $55\frac{1}{2}$ hours a week). At one time the workers in the Worsted Spinning Mill agreed to work longer hours in order to execute a special khaki order, but after they had done so for some little time, their output per week fell to a lower level than before the institution of longer shifts, so the old hours were re-instituted.

The arrangements for women have not undergone much alteration since, as has been seen, there has been little addition to the number of women employed. The Worsted Spinning Mill has most admirable arrangements for both men and women; these have been in existence since long before the beginning of the war, though they are constantly being developed and perfected.

VI. TRAINING

Except in the case of the improvers and overlookers in the worsted spinning, little of the work that women are doing is highly skilled. In only one case did an employer report that the work was too skilled for the use of untrained labour; the reason why women had not been put on to various processes was because they were heavy, not because they were skilled.

When training is needed, it is undertaken by the firm (*e.g.*, in the management of the cutting machine, which is semi-skilled work).

VII. POST-WAR

According to the General Agreement referred to above, it was arranged that women should not continue to be employed in the place of men after men become available; and that when there is unemployment through shortage of work, the women who have taken men's places should be the first to be discharged, provided that qualified men could be found to do the work.

One employer expressed his intention of retaining women on the new processes if there were a shortage of labour at the end of the war.

In most firms giving information on the subject, it was found that the women replacing men had been taken from another department in the same firm. This was the case with all those put on to new manufacturing processes in three out of six firms giving information on the subject, and employing 49 women in the place of men. In another case, 12 out of 18 women replacing men had been employed as weavers by the same firm. In this case, the firm was anxious to replace them in the weaving department when the men returned, as their places had been difficult to fill. In another case, 2 women out of 12 came from within the firm; 2 others were married women helping their husbands at milling; 1 was a Belgian. The remaining 7 were married women or young girls previously unoccupied.

The Welfare Supervisor in the Worsted Spinning Mills thought that the women would probably be retained as overlookers. They had only been taken on temporarily, but the firm was an expanding and progressive one, and would probably have room for them, as well as for any men who returned, in such work.

LEATHER INDUSTRY

(LEEDS)

(Information received from four employers.)

I. EXTENT OF REPLACEMENT

In the leather trade the replacement of men by women has been direct; there does not appear to have been much re-arrangement

of work. There has been considerable difficulty in getting any labour to carry on the work. It had not been customary to employ women at all before the war, although two firms noted that they had done so.

Firm.	MEN.		WOMEN.		Date of Information.
	Employed before War.	Employed now.	Employed before War.	Employed now.	
A	No. not given.	66	0	42	Feb. 27, 1917
B	33	25	0	13	Apr. 12, "
C	121	83	0	12	Mar. 21, "
D	128	106	10	56	Apr. 12, "

PROCESSES ON WHICH WOMEN ARE ENGAGED

<i>Firm A</i>	<i>Firm B</i>	<i>Firm D</i>
Splitting		Painting
Tumbling	Warehouse Work	Warehouse Work
Hanging and Drying	(sorting and baling)	Tanning
Working Shaving machine	Working Boarding machine	Puer Shop
" Setting "	" Setting "	¹ Seasoning
" Glazing "	" Glazing "	¹ Glazing machine
Trimming		¹ Trimming
Graining machine		¹ Graining machine
Finishing	Blacking and finishing	¹ Rolling "
Buffing	dressed leather	¹ Chamois Mill and Press
Measuring machine	Measuring machine	
Labouring		¹ Ironing and Print- ing machines

Firm A had put women on to every process except whitening. Firm D had employed women before the war on all the processes marked ¹.

II. SUCCESS OF REPLACEMENT

It was reported from Firm A that the women were more conscientious than the men, and did not skip their work; they were very good on repetition work, and were better than the men on the glazing machines. The manager said that they worked like grim death on piece-work: he thought this was because they were unaccustomed to being able to earn so much. But he said they were apt to get ill and so lose time, though he found them very punctual when well.

In Firm B it was said that the women's work was satisfactory in all respects; and that the lighter operations in the leather trade were eminently suitable for women. In Firm C they are found to be equal to the men in output, quality of work, and timekeeping; but it is necessary to pay extra to men to carry goods for the women.

In Firm D it is found that three women are needed in the place of two men. Another firm which no longer employs women stated that since the beginning of the war a dozen women or so had been tried on the common finishing such as the blacking and seasoning of leather, and embossing; but only one woman gave complete satisfaction.

Three other firms reported that their work was unsuitable for women; those dealing with raw hides and skins consider the work too heavy.

III. WAGES

Only one firm gave particulars about wages. In that firm all the women earn the same amount as the men on piece-work. All the women, even those doing labouring work, begin at 20s. and get a 20 per cent. bonus in addition. Those who are trimming receive 26s.; those graining, 28s.; and some earn as much as 30s. a week—all receiving the 20 per cent. bonus in addition.

IV. CONDITIONS OF WORK

The hours in Firm A are 53 a week, but there has been much overtime.

Since women are normally not employed in the leather trade, there were no special arrangements for their convenience when they were first introduced; and as their introduction has been recent and it is doubtful whether they will continue in the work, the employers have not yet done a great deal for the women. Some employers, however, are thinking of providing good accommodation.

V. TRAINING

In Firm A it was found best to train the women on the premises. A good deal of the work is not highly skilled, but an attempt is being made to teach the women skilled work (*e.g.*, managing the shaving machine is considered a skilled occupation).

In stamping, the pulling down of the machine is heavy work; in box-making, the women are slower in handling the boxes; in nailing them, three women are required in the place of one man and more machines are necessary. In cleansing, climbing up the frame is risky, and eleven women replace six men.

In the Boiling Department the work is tiring and heavy. Cleaning work in the yard is also heavy, and the work of shovelling salt is hard and continuous.

The director said it was particularly difficult for the women to keep up hard work continuously.

At the same time, the women's work gave satisfaction. In testing in the Chemists' Department, they were said to be more accurate than the boys they replaced. They were more honest, and the firm was about to employ girls instead of boys, wherever it was possible, for that reason. And though the output of the women was less than that of the men they replaced, it was equal to that of any man who could be obtained now.

V. CONDITIONS OF LABOUR

Some of the women (*e.g.*, those employed in quick soap-cooling, box-making, and cleansing, work in three shifts of 8 hours, while the men work in two shifts of 12 hours. Elsewhere the hours were $9\frac{1}{2}$ per day, but overtime was usual.

VII. POST-WAR

The firm would like to keep the women at the end of the war. The women employed were largely the wives and mothers of soldiers who were anxious to "do their bit" and try the hard work, and stick to it.

GENERAL NOTES

I. POSSIBILITIES OF SUBSTITUTION

Leeds is notable for its great diversity of occupations. Most industries are represented to some extent in the city, and no single industry employs a great percentage of the population.

Engineering and tailoring are among the most important Leeds industries, engineering employing a greater proportion of the male

and tailoring of the female labour than any other. In addition, there is a considerable printing trade; the heavy boot trade has long been important; firms dealing with chemicals, dyeing skins and leather, wood, and furniture are numerous. Several varieties of the woollen and worsted industry are to be found, and there is some cotton textile work.

Women have always been employed in most of these trades. They have preponderated in the clothing and textile industry. They have long been engaged in certain processes in printing and boot-making. But they have not been employed in engineering in the past, in the way that women in Birmingham have been employed; neither has it been customary to employ them in the leather trade.

The vast new employment of women in the district is, for the most part, in new work connected with the manufacture of munitions, and cannot be looked upon as substitution, though the proportion of women engaged in such work increases as time goes on.

Actual substitution is to be found either in industries such as the leather and old engineering trades, and in such services as the tramway and outdoor postal ones, or in industries which have always employed women in some departments and are now employing them in others, as in the clothing, printing, woollen and worsted industries, etc.

It has always been customary for a large proportion of the women in Leeds to be engaged in paid occupations, but it has not been usual for married women to work. The Census of 1911 showed that while 64 per cent. of the unmarried women in Leeds were "occupied," only 13 per cent. of the married women and 29 per cent. of the widowed were in industry.

Children and young persons, both girls and boys, have also been largely employed in Leeds, though not to the same extent as in some other towns in the West Riding: 45 per cent. of the girls and 59 per cent. of the boys between the ages of 13 and 14, and 67 per cent. and 82 per cent. respectively of those between the ages of 14 and 15, were returned as occupied in 1911. Younger children are not employed to any appreciable extent: the children of Leeds are not affected by the half-time system prevalent where the woollen and worsted industry is the staple one of the district.

New Labour.—The possible sources of *fresh* labour, then, have been—

1. A small number of young boys and girls;
2. A small number of unmarried women;
3. A comparatively large number of married women;
4. Workers from other districts.

(1) Where there have been difficulties with the Unions, and difficulties in providing proper accommodation for women when they have not been employed before, the employers have often introduced boys instead of women. This has made it hard to get boys in the industries in which they were normally employed, and has forced the extension of women's labour throughout other industries.

(2) Girls and unmarried women have come into industry as far as possible, but, as has been seen, this possible source of fresh labour was not large.

(3) Married women are being employed to a very great extent. It will be noticed that in the National Shell factories and in some of the other larger factories about 50 per cent. of the women are married; and in Leeds, married labour means, for the most part, labour previously unemployed.

(4) There has been remarkably little importation of labour into Leeds. Almost all the workers in the factories come from Leeds itself or from the immediate neighbourhood. Any importation that there is, is much more than counterbalanced by the fact that a large munitions factory outside Leeds draws on the city for a great part of its female labour.

Labour previously employed elsewhere.—Where substitution has taken place, it has largely been done by transference. Women have moved from one industry to another, or from one department of the same industry to another. The clothing trade, *e.g.*, has furnished women to the engineering trade in large numbers. In the clothing trade itself, in the woollen and worsted industry, and in the printing trade, women employed in new departments have largely been taken from other departments. But in the boot trade this is not so. Only one case of a woman moved from the machining department to another was noted, and in that case the woman quickly returned to the machining work, saying the new work was too heavy.

II. SUCCESS OF REPLACEMENT

The division of opinion as to the success of the women's work was great. And, for the most part, any evidence was inconclusive, because of the short time for which the women had been employed.

With regard to the woman worker's relative power of—

(a) *Initiative* : it was generally stated that she had less. But several employers quoted particular instances of initiative: in one case, the employer said he found that the better educated girls had plenty of initiative; another employer said that women had plenty of initiative in the home, which was where they were accustomed to use it, and that he found that they had plenty in his workshop if only they were encouraged to use it there.

(b) *Concentration* : opinions differed. One employer said that he found the women were much less easily distracted than men, and some others agreed with him; but, as a rule, it was said that the women did not give their mind to their work as well as men.

(c) *Self-reliance* : practically all the employers agreed in saying that women had less than men. One or two picked out solitary instances of women with self-reliance as something exceptional.

(d) *Endurance* : generally acknowledged to be less than that of men, but varies according to the nature of the work. In the boot trade (which does not employ women for very long hours), endurance is notably lacking among women doing the new work; also in engineering for the most part, though in one firm employing women on night shifts alternate weeks it was said that they seemed able to go on quite happily month after month.

(e) *Conscientiousness* : there was almost complete unanimity in giving the palm for this quality to women. But there were exceptions, on the tramways, in the Post Office, in two boot and shoe firms, and one engineering firm.

(f) *Ambition* : the women were generally said to lack this quality. They were "expecting to get married" and, therefore, were not so keen to get on. But several employers noted that they were ambitious for high wages, and so very keen on turning out a great quantity if they were paid on piece. But in very few instances were they anxious to learn more than one process.

(g) *Adaptability* : women do not excel in this quality. They

were generally said to be good on repetition work. Many of the employers found it an advantage that the women did not mind staying on the same machine, whereas boys were always wanting to move to a fresh one.

(h) *Accuracy*: opinions were much divided. Some instances of remarkable accuracy were quoted (*e.g.*, one employer had had a girl in his office for a long time and had found only one mistake in the accounts which she did for the works—a mistake of $\frac{1}{2}$ d.). But there was no general consensus of opinion on the subject.

Opinions on output and timekeeping are given in connection with the various industries. Very little statistical information was to be had, but the following facts with regard to timekeeping were elicited from two works—

1. **ENGINEERING WORKS.**—Number of men employed, 115; of women, 385. Normal hours, 6 a.m.–6 p.m.; Saturdays, 6 a.m.–4 p.m. No Sunday work.

BROKEN TIME FOR ONE WEEK: APRIL 16TH–21ST, 1917

	Men.	Per-centage.	Women.	Per-centage.
Absent 6 a.m. to 8 a.m. (<i>i.e.</i> , before breakfast)	19	16·5	60	15·0
Away one day	2	1·7	11	2·8
Certified absences of more than one day	4	3·4	10	2·5

Where the women were away one day, they gave as reasons—minor sickness or domestic cares (*e.g.*, one woman had to take a child with a broken arm to the infirmary). The figures cover too short a period to be of great value. The Welfare Supervisor who supplied them stated that the women broke time more than the men, but it is interesting to see that in a week chosen at random, this was the case only with lost days.

2. **WORSTED SPINNING MILL.**—Number of men employed, 157; of women, 236. Normal hours: 6–5 daily; Saturdays, 6–12. No Sunday labour.

In the figures given, Saturday is counted as a whole day. Every absence is recorded. A person absent for a week is entered as having been absent six times.

RECORD FROM 1ST JANUARY, 1916, TO 31ST DECEMBER, 1916

	<i>Men and Boys.</i>		<i>Women and Girls.</i>	
	Number absent during month.	Total of broken days during month.	Number absent during month.	Total of broken days during month.
January	25	83	85	270
February	37	119	78	241
March	25	79	81	229
April	30	95	105	319
May	19	62	71	191
June	48	144	100	267
July	31	76	82	273
August	22	62	74	235
September	47	117	118	320
October	37	113	90	295
November	67	196	109	363
December	64	219	127	330
Total	452	1,365	1,120	3,333

Estimated total working days in period reviewed—

Males, 47,100. Females, 70,800.

Basis 50 weeks, 6 days per week.

Therefore as 47,100 : 1,365 :: 100 : 2.9% proportion of lost days for males.
 „ as 70,800 : 3,333 :: 100 : 4.71% „ lost days for females.

PERCENTAGE OF LOST DAYS FOR FOUR YEARS

	<i>Men and Boys.</i>	<i>Women and Girls.</i>
1912	2.269%	3.195%
1913	1.772%	4.326%
1914 (Not calculated because of interference in working conditions in August and September)		
1915	2.454%	4.498%
1916	2.90 %	4.71 %

The facts are given precisely as supplied by the Welfare Supervisor.

III. WAGES

Leeds has not in the past been a centre for high wages for women. The clothing trade, the great women's industry, has come under the Trade Board Acts. In other industries, the work done by women has been unskilled and not highly paid. There has been little or no work of exactly the same nature done by both men and women. The war has brought insistence on equal

piece-rates in many instances, but great variations are to be found in time-rates.

IV. TRADE UNION ORGANISATION

Leeds has been behindhand in the organisation of female labour. This is everywhere attributed to the fact that the women leave work when they marry, and so there is no stable element to carry on an interest in the Unions as there is in Lancashire. All the secretaries spoke of the instability of the women as Trade Union members, attributing it to their instability as workers. It is said also that there is a good deal of prejudice against organisation among the women; that they do not think it quite respectable, and are encouraged in this attitude by the men. They do not readily trust the Trade Union officials. It appears that when they do enter the Unions, they seldom care to take a prominent part in their organisation. Since the beginning of the war there has been an impetus given to the organisation of women: the men have recognised the importance of it; the women are taking their work and their unions more seriously, but the present mobility of women from trade to trade presents great difficulties to effective organisation.

It is reckoned that under 15 per cent. of the women in the clothing trade are organised, about 23 per cent. of those in the woollen and worsted industries, and about 50 per cent. of those in the boot trade. No satisfactory figures with regard to the engineering trades can be obtained at present.

BELFAST

NOTES ON THE SUBSTITUTION OF WOMEN FOR MEN

This enquiry was undertaken in April, 1917. Enquiries were made among employers, trade union officials, Government officials, and social workers. The net result is that apparently the amount of industrial substitution proper was negligible. Among the Unions interviewed, the Workers' Union—the Flax-Dressers and Roughers, the Textile Operatives (Women), the Tailors, and the Bookbinders—report no knowledge of substitution. The last states that only nine men out of 130 have left the city during the war period, and no women are employed. The Secretary of the

Trades Council could cite only one case of direct substitution: a girl replacing a man at a *bag-cutting machine*. The man had received 25s. a week; the girl was paid 9s.; and the question was taken up by the Trades Council. The Corporation have as yet only employed women on clerical work. No women are employed on men's work in the shipbuilding yards.

In a few cases in the linen trade—notably in the weaving end—women have, since the outbreak of war, been employed on men's looms; but this seems to be merely a speeding-up of a pre-war movement, and presents no new features. Two cases were noted of women employed on lapping, a branch of trade in which they had not previously been used. The numbers affected were small, and the work seemed to be considered very heavy for women.

In some engineering firms, additional staffs of women have been taken on for munitions work. The amount of munitions work in the town is relatively small, and the numbers affected by this are not large—not exceeding a few hundred in all. It is estimated that 95 per cent. of them are middle-class girls.

The most important reasons for the absence of substitution in industrial employments seem to be the following: The non-application of the Military Service Act has led to the absence of acute shortage; this is emphasised by the fact that in the shipbuilding yards and engineering works enlistment has not been encouraged. In some instances, men have even been returned from the Army. The shortage of men due to enlistment has further been in part made good by the influx of new hands from country districts, and dilution of labour by unskilled or semi-skilled men has apparently been fairly common in some branches of industry.

The net result seems to be that, although the industrial population has been depleted, the shortage is not acute. The Army demand is not as much felt as across the water, and there is no great demand for munition workers in the city itself. In these circumstances, employers do not seem to have undertaken the reorganising and readapting of work which the large employment of women generally demands. It must finally be remembered that the largest part of the female working-class population is already employed industrially, and that there may not, therefore, be as large an industrial reserve of women as in other towns of similar size. That, given the demand, there is some reserve is,

however, shown by the existence of a considerable migration to England for munition work.

Migration to England

A considerable number of women have left the Belfast district for munition work in England and Scotland. It was found impossible to make an exact estimate of the total number affected, but it certainly exceeds a thousand. The women leave usually in batches for work which is found for them through the Labour Exchange, which also makes arrangements for travelling and housing. When the girls are under age, the parents' consent is necessary. The women from Belfast seem to have gone to many branches of munition work in various districts.

The women who have accepted this work are drawn from all kinds of employment. Cases were noticed in which they had moved from many branches of the linen trade, from domestic service, and from laundries. A relatively large number seem to have been drawn from domestic servants, and this appears to be the typical class affected. One case was cited in which a laundry was practically "cleared out" by women leaving for munition work "across the water."

There can be no question that the main attraction is the relatively high rate of wage offered—a rate much higher than their normal earnings; while it must be remembered that there is practically no demand at all for women of this class for munition work in Belfast, as on the munition work done there middle-class girls are almost exclusively employed, and there seems no shortage of this middle-class labour. It was naturally difficult to get accurate information as to the rates of wages paid, but 30s.–35s. a week was usually given as the normal figure. In no case did I hear of a girl earning more than £1 a week before leaving; but here, too, the information was indefinite in the absence of the person primarily concerned. There can, however, be no doubt that the munition wage shows a substantial advance on the workers' previous earnings. One case was given in which a woman previously earning 12s. a week in Belfast was remitting regularly 15s. a week home. The women are usually housed in hostels at a charge of from 13s. to 14s. a week.

Although no detailed evidence could be obtained as to their

industrial ability, there seems a general feeling that these women are both satisfied and satisfactory, and that the scheme of migration is successful.

NEWCASTLE-ON-TYNE

NOTES ON THE EMPLOYMENT OF WOMEN IN SHELL-MAKING AND IN SHIPYARDS

NUMBERS

There has been a large increase in the number of women required for shell-making; but it appears that the very large output previously necessary is no longer required, and there is consequently now some diminution in the numbers of women. In the shipyards there has been an increase in the numbers employed, but at present this increase has been to some extent arrested by shortage of materials.

The women continue to prove satisfactory, and larger numbers would be employed if necessity arose.

EFFICIENCY

There are very few cases of women doing exactly the same work as men, and nearly all the women's work in the shipyard is unskilled or semi-skilled. In a joiner's shop, in a shipyard, it is calculated that twelve women are required to do the work of eight men; but those who wheel barrows seem able to manage the ordinary man's load. French polishing is a skilled man's trade on Tyneside. Two women have been imported from Scotland, where it is a women's trade, and are earning the previous men's wages, 49s. 6d. It is uncertain whether they do exactly the same amount of work.

TIMEKEEPING

Timekeeping appears to be good. This is very largely a matter of good supervision. It is not clear whether timekeeping is better on day-shift than on night-shift. In one shell-shop, where the supervision is good, the time lost on night work averaged 1·2 hours per worker as against 4·6 hours, a figure given by the Committee of Enquiry into health of munition workers. Considerable improvement is shown after the women have been at

work for some time in timekeeping and general efficiency, and the number of small accidents has decreased.

WAGES

The usual shipyard wage is 27s. per week of 53 hours, overtime being paid time-and-a-quarter. A small number of women employed as fitters earn 34s. Shell-makers can earn more. The average is given in one firm as 25 per cent. more than 27s.; but in the largest munition works the wages appear to differ very greatly in different classes of work, so that in some cases unskilled workers are earning considerably more than skilled or experienced workers.

TRADE UNION ORGANISATION

Some women have joined the Gas Workers' Union, and the Amalgamated Union of Labour. Others belong to the National Federation of Women Workers, but this Union has not yet attempted to organise the whole district. On the whole, the attitude of the men appears to be somewhat indifferent but not hostile to the women. There is no indication that the men identify the women's interests with their own, and the women do not all seem convinced of their need of Unions, though they are ready to join when efficiently organised.

HEALTH

On the whole, the health of the women seems to be satisfactory. The evidence obtained does not make clear how far night work causes additional strain. This seems to depend very much on the means of resting during the day.

In some cases, the journey to and from work occupies a long time. When the workers live near their work, their health seems to be better. There is a definite improvement in the health of workers employed out of doors in shipyards. This is more marked, since the winter was unusually long and trying. In one shipyard, care is taken to give all the women a turn of outdoor work as far as possible.

PREVIOUS EMPLOYMENT

A large number of the women are wives, widows, or other relations of soldiers and sailors. Preference is sometimes given to

them when the women are engaged. Some come from occupations in which present earnings are less (*e.g.*, teachers, shop girls, domestic servants, some clerks, and a few employed in rope works or potteries). A considerable number were in no previous employment, and would probably not have gone out to work except for the war.

GLASGOW

CONDITIONS OF LABOUR AND WELFARE WORK

(Nine firms engaged in the manufacture of Munitions, in Engineering, and in Shipbuilding supplied the information from which this report was constructed.)

Nine firms were investigated with a view to finding what are the general conditions of labour and their effects. The total number of women employed is almost 2,000: 37 per cent. of these are married. The women have previously been, for the most part, shop workers, domestic servants, machinists, and dressmakers, the last two classes being preferred by one firm because of their familiarity with fine machinery, and by another firm as being a class suffering through lack of employment.

The women are employed on all shell operations; and in ship-yards, where they are principally engaged in labouring and unskilled work. Some, however, are scattered in small numbers at various processes in yard and engine-shops. In most cases, only one process is taught. With one firm there is an endeavour to train in at least two operations; and in an aeroplane shop, the women rotate from machine to floor work to avoid monotony. The women suffer very little from any form of strain, as no process entails remaining in one position for a long time. The workers are not hurried unduly. Most of the shell processes allow a few moment's rest while the shell is on the machine, and heavy lifting is obviated as far as possible by rolling or trolley devices. Chiefly owing to the high level of wages, and the sympathetic interest of the welfare workers, women can, and do, take a day or half-day off work when necessary. In cases where women are employed in grinding, no harmful effects due to the dust have, as yet, been observed. One firm provides respirators, which are not used. In one yard, women employed in doping (using a dope less poisonous than

formerly) are visited by a doctor each fortnight, and the workers are allowed off for 15 minutes in each hour and, for the most part, do not work on this process all day. In this yard, women working with red lead have the use of hot water.

In addition to the fact that women are chosen to suit the type of work for which they are required, reasonable consideration is given to individual capacity. A girl who is worth training is often transferred to a new process, and one firm takes a woman off the night shift if it is proved to be detrimental to her health.

Ventilation, heating, and sanitary arrangements are good, most of the work being done in comparatively modern buildings. Large open shops in shipyards are somewhat unsuitable for women in the winter months. The fact that in several works only cold water is available militates against cleanliness. Suitable canteens are in all cases provided, and are taken advantage of to some extent, but not so much as might be expected. In many cases, the workers supplement a light lunch with carried food of a substantial kind. Three of the nine factories give a short interval in the morning, when tea or other beverage is provided. Facilities provided by the management are generally made use of, and grievances conveyed through the welfare supervisors are usually given due consideration.

A sickness register is not generally kept except on the initiative of the welfare supervisor, who has usually to call on cases unnoticed within one or two days. The average length of time off is one or two days, generally owing to slight illness only. With one firm, statistics for January and February, 1917, show that 96 per cent. of the hours were worked, and it was said that this will advance with the summer months. There is variety of experience with regard to married women. Several firms find them somewhat irregular. One, however, found them more regular, giving as cause their greater sense of responsibility. The irregularity which exists with some is attributed to home duties and to the lack of incentive because of Government pensions or allowances.

Accidents are usually of a minor character, and occur mostly during the night-shift. There is always an ambulance room of some kind, attended by an ambulance man, nurse, or welfare worker. Such accidents as do occur are attributed to carelessness on the part of the worker, but they seem, for the most part, to be

almost unavoidable without the exercise of such attentive carefulness on the part of the worker as might in itself be injurious to nervous health.

It is generally admitted by managers and foremen that the presence of women has improved the *morale* among the men and also that the places are kept much cleaner. The men and women seem to be settling down to work together. There is less "fooling" and less antagonism on the part of the men. The foreman seems to be least adaptable, in some cases being over-lenient and in other cases opposing the introduction of women as workers, from prejudice, or, as was stated in one instance, from "irritation because he cannot swear at them." A large number, however, are in favour of women's work, and many confess to conversion on this point. The general opinion is that women could continue in repetition work, but not in general engineering, owing to the heavy nature of the work, the long apprenticeship, and women's short industrial career. Many would stay if the wages remain sufficiently high, but the majority regard their work as purely war-time work.

HOUSING

The majority of the workers live near their work, the travelling distance being seldom so great that it cannot be covered in twenty minutes. Conditions with regard to housing are similar to those mentioned in last year's report. There are lists of suitable lodgings in the hands of Mrs. Ross, who places munition workers at the Labour Exchange, and of welfare workers generally. Hostels are not in favour with the women, as the restrictions are irksome and the club spirit seems to be lacking. The housing accommodation is thus adequate so far as lodgings are concerned, and a large majority of the workers live in lodgings. Some districts are, of course, worse off in this matter than others; but travelling facilities, except in the case of cross-river service, is good.

BIRMINGHAM

(The Notes below record the opinions of a Birmingham manufacturer on the question of the increased employment of women in industry.)

In a general way, it must be remembered that women are always at a disadvantage compared with men as to continuity of service

and regularity of attendance. There is the patent fact of their physical condition, the unavoidable result of their sex, and its social mission in life. Undoubtedly the continued employment of women in factories will adversely affect the birth-rate, and also prejudice the health and training of children already born into the world.

The general opinion of those best able to judge is that the average women workers are possessed of equal intelligence to men, and are as quick to learn.

As to timekeeping, experience shows that the conditions alluded to above cause women to lose more time than men.

I consider female workers take quite as keen an interest in the work they are engaged upon as those of the opposite sex. They will keep at it constantly and keenly, provided that they receive the inducement of greater earnings. This is a very human and understandable point of view. There are those who will work as quickly as they can be expected to without such inducement, but they are exceptions to the rule. The rule is that a girl on piece-work or on a premium-bonus system will not only do double the work of a day-worker, but she will remain much keener and more interested, and she will not tire of the job. The monotony of repetition work is dispelled by the interest of counting results, of vying with other operators, and of beating previous records. In fact, quite a mistaken notion prevails as to the alleged monotony of machine and other manufacturing processes. A girl may go on performing the same operations, pulling the same lever in the same way, or going through repetitions of identical movements, week after week, and month after month, without even tiring of the work or finding it monotonous. Girls who are paid by results prefer being on a job which runs all the week to having their work changed at frequent intervals.

We find women, on the whole, to be painstaking and conscientious as to the quality of the work they do.

As regards stamina, that of women generally is inferior to men's, which is again the result of a natural physical disability.

On certain tasks, the output of a girl is greater than any average man could accomplish. Jobs requiring quick and delicate manipulation of the fingers are essentially women's jobs; but, on the other hand, where heavy machines are used, and considerable weights

lifted, the question of sheer strength and stamina tells against the output of a woman.

I think that a great proportion of the women at present employed in munitions and other factories, having tasted the sweets of freedom and good wages, will be loath to go back to the humdrum unpaid household toil. Where this disinclination against a return to women's home sphere will lead us, we cannot foresee; but that it does exist, I know. Typical cases which have come under my personal observation show that women do prefer factory life. They like the freedom, the spirit of independence fostered by their new-found earning power, the social life. Their children, they say, are better off than before, better fed, housed, and clothed. These women will not want to return to their domestic duties after the war. The widening of woman's sphere and outlook is a phase which has been greatly accentuated by war conditions; and, although it will be modified when peace comes, it will never go back to what it used to be.

The soldier-husband, when he comes back, will expect reinstatement in civil life and employment, and he will get it. Employers have pledged themselves to put on again, when they return, the men who left their service at the call of the country.

The Trade Unions will co-operate with the employer and the Government in this reinstatement of soldiers in the factories and industries of the country. That will be their first care; but the number of available men will, unfortunately, be so much less than it was, and the demand for workpeople will, I hope, be so much greater than ever before, that women will be wanted too. Output of all kinds of manufactures to make up depleted stocks, and to replace destroyed and worn-out articles, will be such an urgent necessity, I trust, that there will be plenty of work for all who are ready and willing to do it. The Trade Unions will resent an attempt to keep women on men's work for the sake of obtaining a lower cost of production, *only* if it has a tendency to reduce or curtail the earnings of their members. They will, I believe, be foreseeing enough to co-operate in the industrial employment of women if the men's positions are safeguarded and assured, and will interpose no objection or obstacle to women's continued activities upon work for which they are suited.

TRANSPORT

TRAMWAYS

1. GLASGOW

Actual number of men in Service on 11th July, 1914.	6,003
" " women " "	132
" " men " 29th April, 1916.	4,017
" " women " "	1,455
" " men " 1st May, 1917.	3,426
" " women " "	2,313

Replacement of men by women on basis of total number employed, 38 per cent.

	<i>Department.</i>	<i>No.</i>
	(Clerks)	132)
Women employed on 11th July, 1914	{ Conductresses	0
	{ Drivers	0
	{ Car-cleaners	0
Women employed on 29th April, 1916	{ Conductresses	1,153
	{ Drivers	23
	{ Car-cleaners	125
Women employed on 1st May, 1917	{ Conductresses	1,437
	{ Drivers	94
	{ Car-cleaners	461

Women have been employed in increasing numbers as clerks and taxi-drivers, and in connection with power-station and clothing departments; but our concern is with conducting, driving, and car-cleaning.

Conductresses and Drivers.—Out of 1,746 conductors, 1,437 are women; out of 1,516 drivers, 94 are women. This is striking. Of the 1,437 conductresses, 171 are qualified drivers, but they are not regularly employed as such. Only 94 are driving steadily; it is found that it is too exhausting for the average woman: a full car on an incline needs a powerful hold on the brake, and even the most muscular women-drivers require a few days off now and again to regain their strength. On the other hand, conducting suits the average woman, who is physically fit and smart.

This points to the conclusion already reached, that, after the war, women may remain as conductresses, but not as drivers.

There is an adequate supply of women for the work; at the present moment, when many are suspended from munition work, the applications are specially numerous.

The hours have been extended from 51 to 54 per week, "partly to enable the staff to earn more money," the additional hours

being paid at time-and-a-half rate. Three hours out of the 54 are allowed for reaching the starting-point and making up the cash.

The scale of wages is now almost exactly that of the men. Single men are paid 33s. 7d. to start with (including war bonus of 2s.), and rise to 39s. in the third year and to 41s. 2d. in the seventh. Married men are paid 35s. 7d. to start with (including war bonus of 4s.), and rise to 39s. in the third year and to 41s. 2d. in the seventh.

Women are paid 32s. 7d. to start with (including war bonus of 1s.), and rise to 38s. in the third year and to 40s. 2d. in the seventh.

Generally speaking, the women give satisfaction; but it is noted that complaints of reckless driving and of rudeness have not decreased in number, rather the reverse.

Car-cleaners.—Prior to the war, there were none: on 29th April, 1916, there were 125 out of a total of 524; now on 1st May, 1917, there are 461 out of a total of 595. The men have been encouraged to join the Army or to go into munition work, a pledge being given that they would be taken back to the service after the war.

The working hours are 54 per week. The wage is, for the first two years, 32s. 7d., as compared with the single men's 33s. 7d. and the married men's 35s. 7d.; for the third year, 33s. 8d.; thereafter, 34s. 9d.

It was noted in last year's report that as many women had given up car-cleaning as had stayed on; but the Manager now states that he has got a steadier class, and comparatively few leave. Very many are connected with soldiers—widows and mothers. They are said to clean cars as well as the men, but they are not so reliable, nor so regular and punctual in attendance. This may be partly accounted for by the fact that a fair proportion have other sources of income.

2. LEEDS

(Facts given by the General and Assistant Managers and the Trade Union Secretary.)

I. EXTENT OF REPLACEMENT

NUMBERS EMPLOYED 28TH MARCH, 1917

	Men.	Women.
Conductors	72	451
Car-cleaners	76	73
Clerks	43	70
Mess Attendants	2	10

The substitution of men for women began November, 1915.

The replacement of men by women conductors is direct and complete, except that the male drivers move the overhead trolleys, work which used to be done by the male conductors, but is not undertaken by the women.

No women are employed as drivers.

II. SUCCESS

The Assistant Manager and the Trade Union Secretary agreed that the best of the women conductors were as good as any of the men. It was not easy to make any complete comparison because the traffic had become heavier since the beginning of the war; the trams had been on the point of being completely overhauled when the war broke out, and it had been impossible to get them repaired since labour became scarce, so that the women were dealing with unusually heavy work.

III. WAGES

Women car conductors get 5½d. an hour. The men begin at 5½d. and get 6½d. an hour at the end of six months, but the women do not get this. After three months' service, they get half the men's bonus, and at the end of twelve months they receive the full bonus received by the men. Uniform is also provided.

IV. TRADE UNIONS

(a) The greater number of women had joined the Union.

(b) The main difficulty about organising the women was that the women tended to stay so short a time at the work: 40 per cent. of those who became car conductors had left, and of that 40 per cent., 90 per cent. had left during the first three months.

(c) The men were anxious that the women should join the Union.

A meeting was arranged in October, 1915, between the Union and a Sub-Committee of the General Purposes Committee, as an outcome of which it was agreed that the management could temporarily employ women where men were not to be had. Conditions were to be the same for men and women, uniform was to be provided; only women between 21 and 35 were to be employed; suitable cloakrooms and lavatories were to be arranged for, and the women were to begin with a wage of 5½d. an hour.

V. CONDITIONS

Hours for car-conductors are supposed to be 60 per week, but they are very erratic: sometimes more than 60 in the week, and sometimes as many as 13 in one day.

Car-cleaners work 54 hours (*i.e.*, from 10 p.m. to 7 a.m. from Monday to Saturday; on Saturday, 11 p.m. to 8 a.m.). They do not work on Sunday night.

Opportunities for meals for car-conductors are very uncertain.

VI. TRAINING

No training in driving is given to the women. They are, however, taught how to stop the car in an emergency.

VII. POST-WAR.

The men would wish the women car-conductors to leave the work, but there is no definite undertaking that they shall go. It was thought that a good many women would not care to keep the work on because of the difficult physical conditions.

The car-cleaners would automatically go out of the work with the reimposition of the Factory Act forbidding night labour for women.

TRANSPORT

SCOTTISH RAILWAYS

Only one railway company has been investigated this year; but it is one adequately representative. It was denoted A in last year's report.

Number of women employed before the war	733
" " " on 30th October, 1915	1,184
" " " on 8th May, 1916	1,373
" " " on 1st May, 1917	2,299

	Prior to war.	8th May, 1916.	1st May, 1917.
COACHING DEPARTMENT—			
Ticket-collectors	0	54	81
Booking Clerks	" a few "	140	201
Parcel Clerks			
Carriage-cleaners	58	191	196
Porters	0	93	284
	about 58	478	762

Ticket-collectors are paid the minimum rates applicable to the male staff.

Booking and Parcels Clerks are paid by a scale which was in operation prior to the war, with minimum of £20 and maximum of £55 per annum; but the maximum at leading stations in Glasgow and Edinburgh is £70. Difficulty is experienced in getting suitable girls for this department, especially at stations outside the towns, where it is necessary for them to go into lodgings.

Carriage-cleaners are paid 15s. with a war-bonus of 7s. 6d., as against last year's 12s. with a bonus of 3s.—if they clean the outside of the carriages; 14s. with bonus of 7s. 6d. if they clean the inside. "The inside cleaning is specially suitable for female labour." Women's work in this department is quite satisfactory, though they cannot get through as much as men: three women are needed in place of two men. Only in one instance are women engaged on night-work—where a shift of six is employed from 10 p.m. till 6 a.m.

Female Porters are paid the minimum rates applicable to the male staff: 170 of them are passenger-porters, who stand the work well; 114 are goods-porters, and are satisfactory so far, but they are physically unable to do the same heavy work as is performed by the male staff.

There is no scarcity of applicants for situations as porters, carriage-cleaners, and ticket-collectors. The difficulty seems only to arise with booking and parcels clerks, and the reason seems to be that capable girls can get higher wages elsewhere.

"PUBLIC SERVICES"

POST OFFICE

WOMEN AND POST OFFICE WORK

WAR REPLACEMENT

(Some facts supplied by the Postmasters of two important English towns.)

	TOWN A	Women.
Indoor Work (Postal)	252
" " ("): Sub-Office area	22
" " (Telegraph)	48
Outdoor Work (Postal)	370
" " ("): Sub-Office area	112
Telegraph Delivery Work	32
" " " Sub-office area	6

All these women have been taken on in the place of men.

In the sorting office, five women are employed in the place of four men, merely because they lack training; in time, they will be quite as efficient as the men they replace. Elsewhere, each woman completely replaces a man, but the women are not employed on the heavy "beats" in the business quarters of the city. Also fifty-one men are retained for the heavy indoor work; if women are ever put on to that, more women than men will be required.

The women are doing extremely well, and the indoor staff is excellent. But, though very satisfactory on the whole, the women do not take their work so seriously as the men, because they expect to marry. Therefore they lack punctuality, and are inclined to think small mistakes immaterial. They cannot stand a long strain of work as well as men.

The women newly taken on get 25s. plus a bonus of 1s. for efficiency, which they almost all earn. Women with special qualifications as telegraphists, etc., get 30s. a week. Women have always received less in the Postal Service than men, their wages being on a different scale and running up to 36s., while those of the men go up to 58s.; the chances of promotion for women are also less.

TOWN B

	Normal complement.		May, 1916: War complement.		May, 1917: War complement.	
	Men.	Women	Men.	Women	Men.	Women
Engineering Dept. (Clerical Force)	90	3	31	31 ¹	26	31
Telephone Office (Administration Office)	24	47	12	57	12	63
Sorting Clerks	256	—	122	100 ²	129	177
Postmen	430	—	192	375	143	—
„ (temporary)	—	—	103	80 ³	70	170
Telegraphists	146	110	70	150 ⁴	57	156
„ (learners)	12	9	25	10	7	5

¹ 5 wives of mobilised men.

² 4 wives of mobilised men.

³ 12 married, 4 widows of soldiers.

⁴ 30 married. All old telegraphists, who will undoubtedly return to their homes.

[Particulars of the telephone operators (exclusively female) not shown.]

The Postal Federation, the Union for outdoor workers, admits women; but the Postal and Telegraph Clerks' Association for indoor workers does not.

No opinion was given as to the retaining of the women. It was work that they liked, and they would not wish to leave it; but they had only been engaged temporarily.

In very few cases were the women married.

The schedule has now been brought up to date. It has not been possible to obtain the latest particulars in respect of the proportion of married women.

It will be seen that in the sorting and delivery of letters the number of women has substantially increased.

There has been little change in the organisation of the work, which has been simplified, and the number of collections and delivery of letters has been cut down from seven per day to two per day.

The main source of female labour has been servants, laundry-maids, dressmakers, and such-like workers. The percentage of married to single women is rather small.

It has been officially recognised that it takes five women to do four men's work.

Postwomen are not half as good as men on business rounds. The women are good timekeepers and are also very prompt.

In the case of sorting clerks, the average wage for a man may be said to be 35s. (the maximum of the scale is 58s., but 35s. may be taken as the mean), whilst for women it is 27s.

The health of the women is excellent.

There is little doubt that a greater number of women will be employed on sorting letters and delivering letters in future.

WOMEN IN BANKING

1. SCOTLAND

Before the war, very few women were employed by the Scottish Joint Stock Banks. Head offices may have had one or two female typists; but, other than these, the banks' employees were male. Now, however, the services of women have been made use of to a very considerable extent, although in this respect some banks have been more progressive than others. At the outset, an attempt

was made to meet the loss of men joining the Forces by substituting boys; but in the spring of 1915, women were first introduced, and since then they have been taken on in large numbers. Their service in the banks is, at present, strictly regarded as temporary, as the men who have left will be reinstated at the end of the war, as far as possible. This being so, it is usual for the banks to refrain from engaging women already employed in situations which could be regarded as permanent. It is interesting, however, to note the statement of one bank, "that a few women clerks preferred to leave existing situations for the sake of the experience they would obtain in a bank, which they expected would be of service to them later." The majority of women employed have had no previous business experience, and many of them have entered the banks on account of family connection with members of the staff or through being introduced, for similar reasons, by customers. Comparatively few of the women clerks are under 18 years of age.

Generally the women have undertaken junior clerical work and part of the work formerly done by apprentices. They act as ledger-keepers, as correspondence clerks, and as book-keepers. In a few cases where they have had previous experience or have proved exceptionally capable, they are entrusted with work of a more responsible character. Roughly speaking, the ratio works out at about three to two. We have found, from experience, that late work had a much more detrimental effect upon their health than in the case of men; in consequence, they are now seldom asked to remain after the normal time.

With regard to pay, there are slight variations as between the different banks, but payments may be said to range from 15s. to 30s. weekly. In the case of women employed in the London offices of the Scottish banks, this latter figure is raised to 35s. One bank reports having a certain number of women in receipt of a salary of £2 per week. Payment varies according to previous business experience or other special qualifications. Quite inexperienced women are engaged at 15s. or 20s. a week. If their work is satisfactory, this will be increased in the course of a few months to 25s., subsequent increases being given according to merit.

The enquiry has revealed no case of a woman being employed in the handling of cash and in the carrying through cash

transactions with the public at the bank counter. Apart from the skilled accuracy necessary for such work, a knowledge of the bank's rules and of the principles involved in dealing with negotiable documents is required. Most boy apprentices aim at associating themselves with the Institute of Bankers in Scotland. But the temporary character of their connection with banking militates against the development of any interest by the women clerks in the facilities provided by this body for the study of banking theory and principles. The constitution of the Institute does not at present permit of women sitting for the examinations.

The reports on the quality of women's work are generally satisfactory. One bank writes—

We are pleased to be able to say that we have been very satisfied with the aptitude displayed by our temporary female assistants. They are not, of course, all equally good, but it is only fair to say that some of them are quite equal to the men they have replaced. At the same time, it is also true that, as a rule, they have not been called upon to do quite as much as their male predecessors—we have regarded the ratio as something like three to two.

Another bank finds them

as a whole, conscientious and painstaking in the discharge of their duties; but, owing mainly to their inexperience, their work, unless in certain notable exceptions, requires in the meantime a very considerable amount of supervision.

Still another bank, which reports on the efficiency of the women engaged on the more elementary work with which they have been entrusted, writes—

In the case of the average female clerk, we find considerable inability to meet an emergency, the result being that a larger number of women is necessary to do the same work than in the case of men and boys.

2. IRELAND

To some extent, women have been used as substitutes for men in banks, both in Belfast and other parts of Ireland.

Statements were obtained from two firms who had tried women, who may be regarded as typical.

In the one case, 64 women were employed; in the other, 123, but only 5 of these were in Belfast itself.

Proportion of men to women: approximately 5·1.

Relative efficiency—

On the whole, they have proved very competent, but they are not yet doing full work of male clerks.

The women are employed in replacement of a slightly smaller number of men. There are cases where one woman cannot quite do the work of one man, thus more have to be taken on to do the same amount of work. But in most cases where more women are employed to take the place of absent men, it often happens that there has been an actual increase of work performed arising out of the increased circulation and the issue of War Loans.

At clerical work, the average woman is about as good as the average man; they vary largely . . . they do mechanical work very well, but cannot put on a spurt in case of a rush of work. Their job must be a steady one. When hours are longer than usual (normal hours, 9.30-4.30), we find it adds to their efficiency to give them luncheon and afternoon tea. They get very tired about 5 p.m.; the tea sets them going again. They have taken a share in the overtime work connected with War Loan, but they get tired, and are rather done up when 7 o'clock comes. They keep good time. Their health is good, better than I anticipated. . . . I expected periodic absences and made provision for it in the rules about leave, but I find these periodic absences are rare. They cannot in many cases do work where standing is necessary. I have known girls break down in such cases, and when put on another job find their health quite good. The girls are drawn from various grades of society . . . middle and lower middle class, and lower professional classes.

Temporary clerks are started at a £1 a week. In one case where some women have been put on a permanent staff, they are started at £60, the same rate as men, but their salary increases less quickly than that of a man.

A REPORT ON WORK AND WAGES AT THE PISTON VALVE CHEST SURFACE TABLE IN AN ENGINEERING ESTABLISHMENT IN THE GLASGOW DISTRICT

The following is a record of the work done and time taken by each of the four women at the P.V.C. Surface Table—

Column A is the time taken by the women.

Column B is the time taken by the men when the women were introduced.

Column C is the time taken by the men at the table now.

Women engaged on this work.

No.	29,	takes	19.6%	longer than	man's present	time.
"	58,	"	14.7%	"	"	"
"	107,	"	18.8%	"	"	"
"	116	"	17.0%	"	"	"

(The percentages may vary somewhat, depending upon the run of work. As can be seen from the details below, No. 58 had an advantage during the

period chosen, being at work on a continuous run of chests. The other three workers had many interruptions. It is to be noted that the man still at this table is now mostly engaged on the more detailed parts, at the work on which the women are not experienced.)

FULL RECORD OF WOMEN'S WORK FOR FOUR WEEKS
No. 29

Work done.	A.	B.	C.
6 5½" P.V. Chests	9½	10	8½
24 4½" "	33½	32	29
6 4½" "	7½	8	7½
6 3½" "	7½	8	7½
24 5" "	38½	40	34
24 2½" "	30	28	26
12 4" "	15½	16	14½
6 3½" "	8	8	7½
6 Bottom Door Bkts.	7½	4	4
18 P.V. Chests (mult.)	13½	11½	9½
1 3½" P.V. Chests (rough)			
12 P.V. Chests (mult.)	8	6½	5½
14 " " "	13½	11	10
3 2½" P.V. Chests (rough)			
15 P.V. Chests (mult.)	10	8½	7
8 " " "	9½	7½	6½
3 4" P.V. Chests (B. & T.)			
	211½	198½	176½

No. 58

Work done.	A.	B.	C.
12 5½" P.V. Chests	19	20	17
6 4" "	7½	8	7½
6 3" "	7½	7	6½
18 5" "	28½	30	25½
6 4½" "	8½	8	7½
12 3½" "	15½	16	14½
12 2½" "	14½	14	13
6 5" "	9½	10	8½
12 5½" "	23½	20	17
30 2½" "	37½	35	32½
12 5½" "	19½	20	17
18 4" "	24½	24	21½
6 4½" "	8½	8	7½
48 3½" "	64	64	58
36 3½" "	47½	48	43½
12 3" "	15½	14	13
12 Bottom Door Bkts.	13½	8	8
	364½	354	317½

No. 107

Work done.		A.	B.	C.
12	2½" P.V. Chests	14½	14	13
18	3½" "	23½	24	21¾
12	2½" "	14½	14	13
6	3" "	7½	7	6½
24	3½" "	31	32	29
78	3" "	97½	91	84½
6	5" Trunk Doors	11	7	6
6	3" P.V. Chests	7½	7	6½
1	4½" " (B. & T.)	2¾	2	1½
12	Bottom Doors	15	14	13
12	2½" P.V. Chests	9½	8¾	8
6	2½" "	9¾	7½	6½
3	P.V. Chests (mult.)	9¾	7¼	6¼
14	" (")	19½	15½	14
12	" (")			
6	" before multiple			
29	" after multiple			
		272¾	251	229½

No. 116

Work done.		A.	B.	C.
42	3" P.V. Chests.	50¾	49	45½
6	2½" "	7½	7	6½
18	4½" "	24¾	24	21¾
6	4" "	10	10	8¾
24	Bottom Doors	10¾	10½	9½
6	3½" P.V. Chests.	14½	12½	10½
4	P.V. Chests (mult.)	7½	7½	6½
18	" (")	16¾	16	14½
30	Bottom Doors	15½	14	11¾
14	P.V. Chests (mult.)	9	9	8
12	4½" P.V. Chests	34¾	32	29
6	4½" "	12¾	11½	10
72	Bottom Doors			
6	4" P.V. Chests			
12	Bottom Doors			
24	4½" P.V. Chests			
6	4½" "			
6	P.V. Chests after multiple.			
		213	202¼	182

DETAIL OF INCREASES IN WAGES GIVEN TO WOMEN AT P.V.C.
SURFACE TABLE.

No. 29	<i>At start</i>	23/3/16	22/4/16	27/6/16	28/7/16
	<u>20/-</u>	<u>23/-</u>	<u>24/-</u>	<u>25/-</u>	<u>28/-</u>
	26/9/16	7/11/16	12/12/16		
	<u>31/-</u>	<u>33/-</u>	<u>35/-</u>		

No. 58	<i>At start</i>	25/3/16	22/4/16	13/6/16	18/7/16
	<u>20/-</u>	<u>23/-</u>	<u>24/-</u>	<u>26/-</u>	<u>29/-</u>
	26/9/16	7/11/16	12/12/16		
	<u>31/-</u>	<u>33/-</u>	<u>35/-</u>		

No. 107	<i>At start</i>	13/6/16	25/7/16	5/9/16	26/9/16
	<u>21/-</u>	<u>23/-</u>	<u>25/-</u>	<u>26/-</u>	<u>28/-</u>
	17/10/16	7/11/16	12/12/16		
	<u>31/-</u>	<u>33/-</u>	<u>35/-</u>		

No. 116	<i>At start</i>	13/6/16	25/7/16	5/9/16	26/9/16
	<u>21/-</u>	<u>23/-</u>	<u>25/-</u>	<u>26/-</u>	<u>28/-</u>
	17/10/16	7/11/16	12/12/16		
	<u>31/-</u>	<u>33/-</u>	<u>35/-</u>		

(a) Details showing the earnings of a typical timeworker (keeping good time) in a 6-in. shell factory in the Glasgow district, over a period of 41 weeks—

Week ending	Rate per full week.	Hours: D.S. = dayshift ; N.S. = nightshift.	Actual Wages received, including Bonus on output.	Week ending	Rate per full week.	Hours: D.S. and N.S.	Actual Wages received, including Bonus on output.
1916.				1917.			
July 18	21/-	55.75 D.S. N.S.	35/1	Jan. 2	21/-	37.5 N.S. D.S.	17/8
" 25	"	62.5 D.S. N.S.	42/8	" 9	23/-	41.75 N.S. D.S.	17/7
Aug. 1	"	62.5 N.S.	31/7	" 16	"	54 D.S.	26/3
" 8	"	51 D.S. N.S.	34/1	" 23	"	54 "	29/2
" 15	"	54 D.S.	20/3	" 30	"	54 "	27/3
" 29	"	51.5 "	19/3	Feb. 6	"	59.5 D.S. N.S.	34/2
Sept. 5	"	51.5 "	20/6	" 13	"	62.5 N.S.	44/9
" 12	"	54 "	20/4	" 20	"	62.5 "	42/5
" 19	"	54 "	20/9	" 27	"	62.5 "	40/2
" 26	"	58.75 "	23/8	Mar. 6	"	57 N.S. D.S.	34/11
Oct. 3	"	61.75 D.S. N.S.	29/2	" 13	"	54 D.S.	30/3
" 10	"	59.5 D.S. N.S.	28/3	" 20	"	54 "	30/2
" 17	"	62.5 N.S.	52/-	" 27	"	54 "	32/3
" 24	"	62.5 "	37/3	Apr. 3	"	59.5 D.S. N.S.	35/4
" 31	"	62.5 "	33/-	" 10	"	25 N.S.	12/6
Nov. 7	"	55 N.S. D.S.	30/10	" 17	24/-	30.5 N.S. D.S.	20/2
" 14	"	54 D.S.	23/11	" 24	"	43 D.S.	29/3
" 21	"	54 D.S.	26/2	May 1	"	44.5 N.S.	31/2
" 28	"	54 "	25/2				
Dec. 5	"	59.5 D.S. N.S.	30/-	Total earnings 41 weeks	for		£60 13 2
" 12	"	62.5 N.S.	34/4				
" 19	"	62.5 "	32/2				
" 26	"	50 "	27/4				

The factory in which this timeworker is employed worked on a two-shift system, with a full week of 54 hours' day shift, and 62.5 hours' night shift (a weekly allowance of 4s. 6d. per worker being paid for night-shift duty), until 10th April, when a three-shift system was introduced with a full working week of 43 hours.

The average weekly wage of this timeworker over the forty-one weeks investigated is 29s. 7d.

(b) The wages of certain dilutees working on time rates in a railway engineering factory in Glasgow district—

<i>Week ending</i>	<i>Number of Women.</i>	<i>Total Wages.</i>		
		<i>£</i>	<i>s.</i>	<i>d.</i>
3/3/17	10	13	10	7
10/3/17	17	21	14	4
17/3/17	11	14	15	9
		<u>£50 0 8</u>		

Average weekly wage per worker at time rates (54 hours week) = 26/4

(c) Wages earned by certain women workers in five departments of a large establishment over a period of six weeks ending 15th May, 1917—

Department.	Number of Workers.	Total Wages Earned.	Total possible Wages.	Average Wages Earned per head per Week.
		£ s. d.	£ s. d.	
Mechanics' Department .	10	103 17 0	108 16 4	34/7
Engineering " .	10	69 5 0	71 14 0	23/1
Balloon " .	10	87 16 2	99 1 7	29/3
Aviation " .	10	97 2 9	103 19 7	32/8
Gunshop " .	10	113 11 3	122 17 2	37/10

The average weekly wage earned, over the five departments, is 31s. 5d. per worker.

(d) In a 4·5-in. shell factory the average weekly earnings (including bonus on output, but excluding 5s. night-shift allowance) of the women timeworkers, over a period of thirty-two weeks from week ending 28th May, 1916, to week ending 31st December, 1916, were approximately 27s. 8d.

CHAPTER III

WOMEN WORKERS IN AGRICULTURE

BY MISS E. N. THOMAS, D.Sc., F.L.S.,

*Secretary of Section K and Plant Disease Committee ;
President of University of London Vacation Land Workers,
and Chairman of Committee*

THE position of women with regard to agriculture has varied considerably from time to time and even within recent decades. Before the war, the employment of women in agriculture was on the decline, and the existence of women's labour tended to be regarded as a sign of a low state of progress not to be seen in the more prosperous counties. There seems no doubt that its use had become limited largely to the less skilled and more routine operations associated with certain periods of the year, so that it became essentially a seasonal and part-time occupation, only possible as a partial means of support, and hence almost restricted to married women working from their own homes or imported for brief periods under special conditions, as seasonal gangs for fruit-picking or similar work.

Hence women's work on the land had become associated in the public mind with a low state of progress, with some of the bad characteristics of "casual labour" and, at any rate in connection with seasonal gangs, with a low class of worker. When, therefore, the movements of labour caused by war conditions began to result in a shortage of "pickers" and, subsequently, of men labourers, it was not easy to induce other women to come forward, or employers to welcome them. The distrust thus evinced was not merely the distrust of the unknown demonstrated everywhere in connection with the extension of women's labour and "dilution" problems, but contained the additional element of dissatisfaction with, at any rate, certain aspects of the known, the whole constituting a very strong prejudice against the movement. That this has been to a considerable extent overcome is very

largely due to the patriotism of the educated woman, who threw herself into the breach with spirit and self-sacrifice, demonstrating the possibilities of women's work on the land both by precept and example.

The magnitude of the task and the inevitable slowness and difficulty of the process of substitution, can perhaps best be realised by remembering that the difficulty of inducing a farmer to adopt women's labour is at least as great as that of inducing a works manager to do so, but the achievement is far less important numerically, and the direct result may be only the placing of one woman. For in agriculture as practised in the United Kingdom, there are almost as many employers as employed of the permanent all-the-year-round kind.

It is difficult to draw a line between the replacement of women by women of a different type and experience, and the replacement of men by women, since the former has had a great influence on the latter, inasmuch as the new type of woman worker has generally shown more amenability, conscientiousness, and intelligence than the customary worker. This has made a favourable impression on the mind of the employer even when accompanied by the slower rate of work due to inexperience. It is evidenced by the frequent requests for educated women as farm hands, the demand being often accompanied by a refusal to take any other type. The supply of these is, in the nature of the case, very limited, while there still remains much pioneer work which experience shows can best be done by women of this kind.

During the first months of the war the introduction of women to replace withdrawals from the normal labour on the land was carried on slowly by a few voluntary organisations and through the ordinary routine of the Labour Exchanges. In 1915, however, a movement was set going, at the instigation of the Board of Agriculture, for the formation of Women's War Agricultural Committees or Farm Labour Committees throughout England and Wales under the auspices of the Board of Trade. By the end of 1916 they had been established in most counties, and were visited and encouraged by women agricultural officers of the Board of Trade and by the sole woman officer of the Board of Agriculture at that time appointed. The Committees, which varied somewhat in constitution, etc., appointed representatives in

every district, the local representative being known as a village registrar. The registrars, who endeavoured to encourage and register offers of local labour, worked under the District Representative, sometimes also with a District Committee. Towards the close of 1916 there were 4,000 registrars and some 1,000 district representatives, and thousands of public meetings had been held for the purpose of convincing the farmer and the village woman of the necessity of using her labour on the land. There is no doubt that this organisation accounts largely for the great increase in local labour which undoubtedly took place in 1916, and which is revealed in the statistics compiled by the Board of Trade Industrial (War Enquiries) Branch and founded on employers' returns.

In the spring of 1916 the colleges, in particular of the University of London, co-operated with the Board of Trade to organise some hundreds of university women for vacation work on the land for periods varying from three weeks to three months.¹ The work of organising the labour and equipping the gangs fell on the University Committee, while the Board of Trade secured and guaranteed work and accommodation. The result of this movement² was very encouraging, particularly in its missionary aspect, as is shown by some of the extracts from the report. Its effect both on farmers and local women was not inconsiderable, and helped to foster both supply and demand in the employment of women on the land. Both these efforts tended in the direction of additions to seasonal or part-time field workers; but in the meantime the necessity of calling out a body of women willing to serve all the year round and capable of undertaking more skilled work became impressed upon the minds of many, and bore fruit in the foundation of the Women's National Land Service Corps in February, 1916, and in the Women's Legion and other organisations.

The desirability of attempting to "train" women in agricultural work—particularly in milking—had been realised at an early stage of the war; and certain Agricultural Colleges and Farm Institutes, some of which had not previously been open to women, instituted short courses for this purpose. At the same time, the County

¹ Similar work on a smaller scale had been carried out by University women in 1915 in co-operation with various organisations.

² "Report of the Vacational Land Workers and Fruit Pickers, 1916."

Education Authorities, encouraged and subsidised by the Board of Agriculture, offered scholarships in connection with these courses; and in some enterprising counties special training centres were set up through the Women's War Agricultural Committees by arrangement with farmers, and involving in some cases the establishment of small hostels. This tended to call out the country-bred girls, often of the domestic servant class, and frequently only 16 or 17 years of age. The holders of scholarships were generally required to work in the county for six months after their brief training of four to six weeks, during which time they were maintained as well as given free tuition. Some excellent milkers and farm workers were produced notwithstanding the short training. The Women's Land Service Corps, which also trained in conjunction with the Women's Farm and Garden Union, aimed at attracting the more educated woman capable of pioneer work in tackling men's jobs, such as motor ploughing, etc., and of organising and leading village women. The work of selection was therefore very onerous, particularly as many applicants were from the towns, and references and medical examinations were found necessary. This Association has probably trained nearly 1,000 women and placed another 1,500.

Notwithstanding these various efforts, the work of finding and placing women for permanent work proceeded somewhat slowly: this was partly due to the natural difficulties of the position and a little perhaps to a certain prejudice against Labour Exchanges—the only national medium—overcome in places by the tact and zeal of a particular officer, but nevertheless operating as a whole. This was evidenced by the better results often obtained by a voluntary organisation such as the Women's Land Service Corps¹ and by the direct work of placing, beginning to be carried on by the Women's War Agricultural Committees.

At the beginning of 1917 a great impetus was given to the movement by the formulation of a scheme for the more extensive recruiting and training of women on a national basis. At the same time, the task of developing and extending the work of the Women's War Agricultural Committees was undertaken wholly by the Board of Agriculture, thus linking their work more closely with that of the County War Agricultural Committees,² which worked under

¹ State-aided.

² Composed almost entirely of men.

the auspices of the Board of Agriculture, and upon whose Executives had been conferred very wide statutory powers.

The work of both these Committees is now controlled by the new department of Food Production, the work of the Women's War Agricultural Committee being directed from the Women's Branch of the Board of Agriculture. This direction is effected by a body of women at headquarters and by local officers, one in each county under the supervision of an inspector for a group of counties. The degree of co-operation between the Committees in the counties still varies very much; indeed, in general, the co-operation is not as close as the work demands.

In March, 1917, the energies of the women's organisation became concentrated on the effort to secure for the land a permanent body of women who should undertake service for the duration of the war under semi-military conditions of mobilising, etc., and be guaranteed to the farmer as strong and medically fit, having been in all cases selected with considerable care and, when necessary, trained in farm work for at least a month. In return for this, the farmer is expected to pay a minimum wage of 18s. per week or the current rate of the district, whichever is the higher.

The scheme was launched under National Service, the actual work of receiving applications and calling up volunteers being carried out by the Ministry of Labour; but the selection, training, and placing of National Service volunteers for the land was in the hands of the Women's War Agricultural Committees¹ and the officers of the Board of Agriculture, with the co-operation of officers of the Ministry of Labour.

The first members of the Women's Land Army were placed in employment about the beginning of May, and by the end of July more than 5,000 had been chosen from some 40,000 volunteers and enrolled for land service. It is intended that the Women's Land Army should form one of the most stable elements in the fluctuating welter of agricultural substitution labour, composed, as it is, of soldiers, prisoners, women, and school children. It may be regarded as directly replacing men, and certainly falls under the category of permanent female labour as used in the Reports of the Board of Trade Industrial (War Enquiries) Branch. The figures appearing in these for July show an increase of only 2½ per

¹ Working through special sub-committees.

cent. as between 1916 and 1917; and the report states that they have reason to suppose that the 1917 figures are rather high, "so that it is doubtful whether there has been any appreciable increase in the number of permanent women employed on the land during the last year."

ENGLAND AND WALES
Permanent Female Labour

Percentage: Rise (+) or Fall (-) No. on land in July, 1914, taken as 100 (actual no. 57,000)	July, 1915. - 7.3 (approx. 52,800)	July, 1916. + 40.0 (approx. 79,400)	July, 1917. + 42.6 (approx. 80,800)
---	--	---	---

According to these figures, which are based on employers' returns received from about 6 per cent. of the whole, there was a decrease in women's labour in July in 1915, as compared with the standard, viz., the number of women working on the land in July, 1914, followed by a great increase in July, 1916, the number remaining approximately the same, or showing a very slight increase in July, 1917.

It seems fairly clear that, whatever the reason, these returns do not include the addition of 5,000 members of the Women's Land Army, which in themselves would constitute nearly 10 per cent. increase, but which may, of course, have been counter-balanced in whole or in part by a withdrawal of women appearing in the 1916 returns. In addition, it is probable that a considerable proportion of the Women's Land Army had only just emerged from training, and was not actually in employment at the time that the return was made.

The conclusion as to the distribution of the rise and fall is borne out by the April returns, which, however, show rather more difference between 1916 and 1917.

ENGLAND AND WALES
Permanent Female Labour

Percentage: rise (+) or fall (-) in numbers employed as compared with July, 1914

April, 1914.	April, 1915.	April, 1916.	April, 1917
- 24.1	- 22.5	- 0.5	+ 4.7

From the figures given in the Report, it would appear that, taking the period of the war to July, 1917, the total number of women recorded as permanently added to the land in England and Wales during the three years is about the same as the number of women who were employed on the land in Scotland in July, 1914, viz., 23,000. The total thus reached in July, 1917, for England and Wales alone is roughly equivalent to the 80,000 pre-war figure for the whole of Great Britain. The greater part of this increase has apparently taken place between 1915 and 1916.

A very interesting consideration is raised by a comparison of the number added, with that recorded by employers for direct replacements of men, which is 35,000 or 43 per cent. of the total number employed in July, 1914. This seems to indicate that, as in other industries, not only has men's work been done by additional women, but also by the shouldering of new tasks by women already on the land. During the period of the war, the percentage of female to total labour has risen from 9 per cent. to 12 per cent. over Great Britain as a whole, the increase being higher in England and Wales, since, in Scotland, there has been a decrease in the number of women permanently employed on the land.

The work in agriculture is, for the most part, so individual, that there has been little opportunity for that adjustment to bring work within the scope of women's strength, which has figured largely in the war modifications of other industries. On the other hand, there is little room for doubt, as later developments have shown, that some of the modifications carried out in the latter have been as much to meet Trade Union regulations as to meet either lack of skill or lack of strength on the part of women. In agriculture, ridicule replaces regulations, and is frequently more potent; custom controls action and is difficult to evade. In the most conservative of all industries, there are many who do not "hold with women," as there are some who do not "hold with the war." But the circumstances do not lend themselves to half measures, so that where women have been adopted, the replacement of men by women has been more direct than in other industries. Moreover, women have "replaced" men by undertaking work carried out by men in pre-war times.

When we turn to the labour listed as casual, the same general result appears, namely, that the great increase in female labour

hitherto, took place between 1915 and 1916, very little difference being shown between 1916 and 1917, except for a slight increase in April, 1917, as compared with April, 1916, amounting to 4 per cent., or about 2,000 women.

All the figures for casual labour are given for Great Britain as a whole.

The increase in casual female labour in 1917, as compared with 1914, is 66 per cent. in April comparisons and 77 per cent. in July comparisons, while the increase in permanent female labour is 21·8 per cent. in April comparisons and 27·8 in July comparisons. The seasonal differences are, however, much greater for permanent female labour when England and Wales are considered apart from Scotland: the April comparisons then show an increase of 28·8 per cent. and the July numbers an increase of 42·6 per cent.

The distinction between permanent and casual labour, at no time easy of definition in the agricultural world, has become more difficult of late years, when fewer farms can afford the exclusive use of specialists, such as thatchers, etc.

The differences between the periodic returns, which for so-called permanent labour constantly show the highest figures in July, indicate that the farmer does not confine the term "permanent" or "regular hands" to all-the-year-round or annual workers, but includes many seasonal workers. This is probably more true for women than for men, since there was before the war a comparatively small number of all-the-year-round female workers, but a fairly large number of constant seasonal workers, who formed a very permanent element of agricultural labour, and would seem to be returned as such, notwithstanding their seasonal character.

The Village Registrars' Reports furnished to the Board of Agriculture yield 116,000 part-time workers in England and Wales for July, 1917; and this must be multiplied by some unascertained factor to obtain the total, since the returns do not cover the whole of the country.

It is impossible to compare permanent with whole-time, or casual with part-time labour in the returns to hand, but the *total* actually *recorded* by the Women's Branch of the Food Production Department of the Board of Agriculture reaches about 125,000 for England and Wales; and the total *calculated* by the War Enquiries Branch of the Board of Trade is about 192,000 for Great Britain,

The latter method of enquiry does not include the female relations of farmers occupied¹ on the land, so that the statement made by the President of the Board of Agriculture appearing in the Press on 11th September that 200,000 are at work on the land is fully borne out by these figures.

This number was approached in July of 1916, so that there seems to have been no very great accession in 1917 in the total number of women workers on the land in Great Britain, according to the Board of Trade statistics; but the organisation set up in England and Wales by the Board of Agriculture has placed some 6,000 women of a type and under such circumstances that they must add materially to the working strength of the female agricultural population. In addition, the Board's arrangements carried out by the Women's Land Service Corps—for supplementing local labour by imported seasonal gangs—has resulted this year in the supply of 1,000 women for this purpose.

The scattered nature of agricultural employment necessitates organisation on a territorial basis, and the work on this account is carried out by committees in every county, acting in closest co-operation with officers of the Board.

SELECTION.—References, medical examinations, and interviews weed out the unsuitable volunteer at the outset; the period of training reveals cases of unsuitability; and, finally, the exigencies of actual employment test the strength of character and physique more than some are able to stand. Of some 20,000 applicants who had appeared before the Selection and Allocation Committees up to September, only about one-third, viz., 6,500, therefore were accepted. The great majority—nearly 5,000—required training, but about 1,500 were placed directly on the land.

TRAINING.—There are two methods of training—

(a) That which may be regarded as a system of apprenticeship, whereby the volunteer, who has some knowledge of land work, is placed with an employer, who receives her services free for three weeks, during which time she gains in knowledge and he instructs her in his own special methods. At the end of this time, he takes her into ordinary employment at not less than 18s. per week.

¹ This difference in the basis of enquiry accounts also for the difference between the figures given by the Board of Trade and those given by the Board of Agriculture for permanent pre-war labour.

During apprenticeship the girl is maintained by the Government, as a bursar, at a cost not exceeding 15s. a week.

(b) That which is carried out by the Board of Agriculture at its special training centres, or by arrangement at certain Agricultural Colleges and Farm Institutes, or on private practice farms. The cost of this training with maintenance must not exceed 25s. per head per week for four weeks; and, in practice, varies from 15s. to 25s., and is very commonly carried out for 20s. or 21s.

The actual training may be entirely in the hands of the farmers and their helpers, as in the case of bursars and trainees on small practice farms; or entirely in the hands of a special instructress appointed by the Board, through their Women's War Agricultural Committees and officers; or partly by means of an instructress acting in conjunction with practice farms, constituting the training centre. Finally, in the case of farm institutes and agricultural colleges, it is furnished by the staff of such institutions as for other students. In one special case, an Agricultural College was lent to the Women's Branch of the Board of Agriculture, who appointed a small special staff of women to provide one month's emergency trainings. This staff also managed most effectively the demonstration farm attached. The early trainings were naturally very generalised, and consisted of a brief acquaintance with current farm processes in connection with field and stock, the only specialisation insisted on being, in most cases, the acquirement of a fair standard of milking by the end of the month. Some attempt is now being made to standardise the reports of instructresses, etc., by the establishment of special tests. Recently, short additional trainings have been granted to specially selected workers to fit them for thatching, thrashing, motor ploughing, hurdle-making, etc., and the ordinary training is now extended to six weeks. During all trainings in excess of four weeks, the trainees are granted 4s. per week in addition to maintenance.

To provide against the possibility of unemployment in winter, arrangements have been made for the provision of land workers for timber work, hay-baling, tree-pruning, etc.; and, in some cases, special short trainings are given, as, for instance, in rabbiting. The training centres have occasionally been able to provide emergency help in their immediate neighbourhood, and there are instances of instructress and trainees being hired to reap an

adjacent oat-crop which would otherwise have been lost, and to motor plough neighbouring fields, providing both tractor and workers.

PLACING.—The greatest care is taken to ensure the maximum of safety and comfort for the worker on the land, but the conditions are very difficult to deal with. A member of the organisation is required to inspect and guarantee the place of employment and the place of lodging before a National Service volunteer is allocated to it, and, when placed, a Welfare Supervisor keeps in touch with her. Such inspections are not always easy to carry out, and considerable tact is required.

The question of billeting constitutes, in some cases, the limiting factor, particularly in certain counties. Hostels are out of the question in most cases for permanent workers, as the farms are too scattered to allow of their use. In some parts, the number of cottages in existence is astonishingly small and, as the total labour on the land has increased during the war, it is not surprising that the housing question is acute. Women can rarely be inserted where men have been withdrawn; and even where cottages have good spare accommodation, the occupiers frequently will not let it and, in any case, often absolutely refuse to look after or board the land worker, who then has the additional burden of housework added to her man's day of man's work. This combination must prove fatal, and it is essential that an effort be made to obviate the possibility of such unfair conditions for the woman land worker. It seems, therefore, that it may become necessary to put in force the Compulsory Billeting Bill.

On the other hand, some workers are extremely well housed and almost luxuriously conditioned. There are instances of employers lavishing fruit and vegetables, and conveying workers here and there in their private motor-cars. In short, as for all agricultural conditions, so much depends upon the individual employer, that it is very difficult to equalise matters for the worker and to prevent conditions in a few cases falling below the agreed minimum of suitability, while in others it is far above.

WAGES.—On the whole, little difficulty has been met with in obtaining the guaranteed minimum wage of 18s. per week as the initial wage of the unskilled worker. The cost of maintenance, however, is so high, that it becomes practically impossible to maintain

a decent existence on this; and it is very much to be desired that the minimum should be raised at an early date. The present low rate of pay militates heavily against securing a sufficient number of suitable land workers, and it is very probably one of the chief reasons why not more than half of the original volunteers follow up their cards by appearing before a Selection Committee. The reliable, alert artisan is inevitably drawn into the much more highly paid occupations of munitions, etc.; and except for the comparatively few women able and willing to offer sacrifice on the altar of patriotism, food production must depend upon workers drawn from the less intelligent and less fit residue. This is, of course, only the current feminine aspect of the dire consequences of the wage disability under which agriculture has laboured for so many years.

Since the establishment of the minimum wage, members of the Women's War Agricultural Committee in some counties have found it necessary to counteract its lowering effect by insisting—often with the ready collaboration of the farmers—upon the payment of a minimum initial wage exceeding by at least 5s. per week the cost of maintenance. This generally necessitates a payment of 20s. or 21s. per week. The most profitable arrangement is undoubtedly that whereby the worker *lives in*, and is paid, in addition, a wage varying from 5s. to 10s. per week. As the Government supplies free outfit, free travel, and maintenance during a limited period of unemployment to the members of the Women's Land Army, they are just able to keep going. It should be noted that many of the more skilled and experienced workers are able to secure 25s. or even 35s. per week.

In most counties a Wages and Billeting Sub-Committee has been set up, which aims at collaborating with the County Labour Committees set up for the purpose of controlling and supplying various kinds of substitution labour.

The Welfare Supervisors inevitably become acquainted, in the course of their work, with many circumstances bearing on the wages question, which are reported on and considered by the committees and officers.

In cases of unsuitability for the work owing to health or temperament, the volunteer is induced to withdraw; but no member can be dismissed from the Land Army for misconduct until a

committee of three has investigated her case and reported to the Inspector, to whom the worker has the right of appeal. The percentage of failures following upon acceptance and comprising withdrawals and dismissals is about fifteen.

The work of 1917 has added to female agricultural labour a body of selected workers sifted at several stages and with some claim to be classed as skilled. This, if maintained, increased, and improved, cannot fail to constitute a national asset of considerable value. There is no very definite evidence that local labour has increased or indeed improved during the last year; and the farmer is still much in need of reliable seasonal help, which at the moment is supplied sporadically and unequally by soldiers, school children, and, more rarely, by prisoners. The first two are illegitimate sources of labour if any other can be secured, and should not be taken from their proper avocations if women are available and can do the work.

The situation indicates that local labour still needs stimulating to the full and supplementing by gangs of imported women available as required and at short notice. On the other hand, there are not wanting signs of wilful neglect of available and much-needed labour to the great detriment of crops. This should not be permitted, as it is clearly against the public weal. The possibility of under-staffing and consequent under-farming constitutes a menace to agriculture, as the dire effects are so far-reaching and difficult of arrest.

Considering the financial unattractiveness of the occupation, women have come forward with surprising readiness; and it is obvious that among the more earnest volunteers, in addition to a strong desire to serve their country, many feel the call of the land for its own sake. It is not uncommon to hear the worker affirm after considerable experience of agricultural work, including its most repellant aspects, that she would not return under any circumstances to her old life—it may be to that of a West End showroom girl.

This result, contrary to the expectation of farmers, expressed in 1915,¹ gives great hope for the future that women may constitute a permanent element on the land both at home and in our Colonies as workers and wives under new and better conditions.

¹ Agricultural Education Conference,

The present situation is clearing up the confusion in the popular mind between the existence of women's labour on the land and the particular type and circumstances of such work. The exigency of the war is removing the stigma attached to women's labour, which before the war had become degraded to a drudgery rightly viewed with disfavour, and is pointing the way to woman's legitimate place in the more highly skilled and intensive cultivation of the future.

CHAPTER IV
WORKSHOP COMMITTEES:
SUGGESTED LINES OF DEVELOPMENT

BY C. G. RENOLD

INTRODUCTION ¹

THROUGHOUT the following notes it is assumed that the need is realised for a new orientation of ideas with regard to industrial management. It is further assumed that the trend of such ideas must be in the direction of a devolution of some of the functions and responsibilities of management on to the workers themselves. These notes, therefore, are concerned mainly with considering how far this devolution can be carried under present conditions, and the necessary machinery for enabling it to operate.

Before passing, however, to detailed schemes, it is worth considering briefly what the aims of this devolution are.

It must, in general, be admitted that the conditions of industrial life fail to satisfy the deeper needs of the workers, and that it is this failure, even more than low wages and bad conditions, which is responsible for much of their general unrest. Now the satisfaction to be derived from work depends upon its being a means of self-expression. This again depends on the power of control exercised by the individual over the materials, processes, and conditions involved; or in the case of complicated operations, where the individual can hardly be other than a "cog in the machine," on the willingness, understanding, and imagination with which he undertakes such a *rôle*. In the past, the movement in industry, in this respect, has been all in the wrong direction, namely, a continual reduction of freedom, initiative, and interest, involving an accentuation of the "cog-in-the-machine" status. Moreover, it has too often produced a "cog" blind and unwilling, with no

¹ In connection with this memorandum, the recommendations made last year in *Labour, Finance, and the War* (Chap. II, pp. 20-55) should be read.
—EDITOR.

perspective or understanding of the part it plays in the general mechanism of production, or even in any one particular series of operations.

Each successive step in the splitting up and specialising of operations has been taken with a view to promoting efficiency of production, and there can be no doubt that efficiency, in a material sense, has been achieved thereby, and the productivity of industry greatly increased. This has been done, however, at the cost of pleasure and interest in work; and the problem which faces us now is the possibility of restoring these to some extent, as, for instance, by some devolution of management responsibility on to the workers; and how far such devolution is possible under the competitive capitalist system, which is likely to dominate industry for many long years to come.

Under the conditions of capitalist industry, any scheme of devolution of management can only stand provided it involves no net loss of productive efficiency. It is believed, however, that even within these limits, considerable progress in this direction is possible, doubtless involving some detail loss, but with more than compensating gains in general efficiency. In this connection it must be remembered that the work of very many men, probably of most, is given more or less unwillingly; and even should the introduction of more democratic methods of business management entail a certain amount of loss of mechanical efficiency, due to the greater cumbersomeness of democratic proceedings, if it can succeed in obtaining more willing work and co-operation, the net gain in productivity would be enormous.

Important and urgent as is this problem of re-arranging the machinery of management, to enable responsibility and power to be shared with the workers, another and preliminary step is even more pressing. This is the establishing of touch and understanding between employer and employed, between management and worker. Quite apart from the many real grievances under which workers in various trades are suffering at the present time, there is a vast amount of bad feeling, due to misunderstanding, on the part of each side, of the aims and motives of the other. Each party, believing the other to be always ready to play foul, finds in every move easy evidence to support its bitterest suspicions. The workers are irritated beyond measure by the inefficiency and

blundering in organisation and management which they detect on every side, and, knowing nothing of business management, can neither understand the ordinary difficulties inherent in administration, nor make allowances for the enormous special difficulties under which employers labour at the present time. Similarly, employers are too ignorant of Trade Union affairs to appreciate the problems with which the present "lightning transformation" of industry confronts those responsible for shaping Trade Union policy; nor is the employer in close enough human touch to realise the effect of the long strain of war work and of the harassing restrictions of personal liberty.

More important, therefore, than any reconstruction of management machinery, more important even than the remedying of specific grievances, is the establishing of some degree of ordinary human touch and sympathy between management and men. This need has an important bearing on any discussion with regard to developing machinery for joint action. It cannot be emphasised too strongly that the hopefulness of any such attempt lies, not in the perfection of the machinery itself, nor even in the wideness of the powers of self-government granted to the workers, but in the degree to which touch and, if possible, friendliness can be established. It should be realised, for instance, by employers that time spent on discussing and ventilating alleged grievances which turn out to be no grievances, may be quite as productive of understanding and good feeling as the removal of real grievances.

Passing now to constructive proposals for devolution of management, the subject is here dealt with mainly in two stages.

Under Section I, some of the functions of management which most concern the workers are considered, with a view to seeing how far the autocratic (or bureaucratic) secrecy and exclusiveness which usually surround business management, *vis-à-vis* the workers, is really unavoidable, or how far it could be replaced by democratic discussion and joint action. The conclusion is that there is no reason inherent in the nature of the questions themselves why this cannot be done to a very considerable extent.

Section II considers the machinery needed to make such joint action workable—a very different matter from admitting that in itself it is not impossible! The apparent complication of such machinery is doubtless a difficulty, but it is not insuperable, and

is, in practice, less formidable than it seems at first sight. It must be realised, however, that the degree of elaboration of the machinery for joint working, adopted by any particular industry or firm, must be in relation to the elaboration of the existing management system. It would be quite impossible for many of the refinements of discussion and joint action suggested to be adopted by a firm whose ordinary business organisation was crude, undeveloped, and unsystematic. This point is more fully dealt with in this section. The remaining Sections are of the nature of an appendix.

Section III contains a summary of the scheme of committees contained in Section II, showing the distribution to each committee of the various questions discussed in Section I.

In Section IV some comments are made, based on actual experience of an attempt to institute machinery of the kind discussed, and some practical hints are given, which may be of assistance to others.

SECTION I

SCOPE OF WORKERS' SHOP ORGANISATIONS— MANAGEMENT QUESTIONS WHICH COULD BE DEVOLVED, WHOLLY OR IN PART

It is proposed in this section to consider the activities which organisations of workers within the workshop might undertake without any radical reorganisation of industry. What functions and powers, usually exercised by the management, could be devolved on to the workers, and what questions, usually considered private by the management, could be made the subject of explanation and consultation? The number of such questions as set out in this section may appear very formidable, and is possibly too great to be dealt with, except by a very gradual process. No thought is given at this stage, however, to the machinery which would be necessary for achieving so much joint working, the subject being considered rather with a view to seeing how far, and in what directions, the inherent nature of the questions themselves would make it possible or advisable to break down the censorship and secrecy which surround business management.

In the list which follows, obviously, all questions are not of equal urgency, those being most important which provide means

of consultation and conciliation in regard to such matters as most frequently give rise to disputes, namely, wage and piece-rate questions, and, to a lesser degree, workshop practices and customs. Any scheme of joint working should begin with these matters, the others being taken over as the machinery settles down and it is found practicable to do so. How far any particular business can go will depend on the circumstances of the trade, and on the type of organisation in operation at present. Though machinery for conciliation in connection with existing troubles, such as those mentioned, must be the first care, some of the other matters suggested in this section (*e.g.*, safety and hygiene, shop amenities, etc.) should be dealt with at the earliest possible moment. Such subjects, being less controversial, offer an easier means of approach for establishing touch and understanding between managers and men.

The suggestions in this section are divided into two main groups, but this division is rather a matter of convenience than an indication of any vital difference in nature. The suggestions are arranged in order of urgency, those coming first where the case for establishing a workers' shop-organisation is so clear as to amount to a right, and passing gradually to those where the case is more and more questionable. The first group, therefore, contains all those items where the case is clearest and in connection with which the immediate benefits would fall to the workers. The second group contains the more questionable items, which lie beyond the region where the shoe actually pinches the worker. These questions are largely educational, and the immediate benefit of action, considered as a business proposition, would accrue to the management, through the greater understanding of management and business difficulties on the part of the workers.

1. QUESTIONS IN CONNECTION WITH WHICH SHOP ORGANISATIONS WOULD PRIMARILY BENEFIT THE WORKERS

This group deals with those matters where the case for establishing shop organisations, to meet the need of the workers, is clearest.

(a) COLLECTIVE BARGAINING

There is a need for machinery for carrying this function of the

Trade Union into greater and more intimate workshop detail than is possible by any outside body. A workshop organisation might supplement the ordinary Trade Union activities in the following directions—

1. *Wages*.—(Note: General standard rates would be fixed by negotiation with the Trade Union for an entire district, not by committees of workers in individual works.) The following are instances of what the committees of workers might attend to—

(1) Ensure the application of standard rates to individuals, to see that they get the benefit of the Trade Union agreements.

(2) Where a scale of wages, instead of a single rate, applies to a class of work (the exact figure varying according to the experience, length of service, etc., of the worker), to see that such scales are applied fairly.

(3) See that promises of advances (such as those made, for instance, at the time of engagement) are fulfilled.

(4) See that apprentices, on completing their time, are raised to the standard rate by the customary or agreed steps.

2. *Piece-work Rates*.—(It is assumed that the general method of rate-fixing (*e.g.*, the adoption of time study or other method), would be settled with the local Trade Unions.)

(1) Discuss with the management the detailed methods of rate-fixing, as applied either to individual jobs or to particular classes of work.

(2) Where there is an agreed relation between time-rates and piece-rates, as, for instance, in engineering, see that individual piece-rates are so set as to yield the standard rate of earning.

(3) Discuss with the management reduction of piece-rates where these can be shown capable of yielding higher earnings than the standard.

(4) Investigate on behalf of the workers, complaints as to inability to earn the standard rate. For this purpose, all the data and calculations, both with regard to the original setting of the rate and with regard to time booking on a particular job, would have to be open for examination.

[*Note*: It is doubtful whether a shop committee, on account of its cumbersomeness, could ever settle detail, individual rates, except where the jobs dealt with are so large or so standardised as to make the number of rates to be set per week quite small.

A better plan would be for a representative of the workers, preferably paid by them, to be attached to the rate-fixing department of a works, to check all calculations and to look after the workers' interests generally. He would report to a shop committee, whose discussions with the management would then be limited to questions of principle.]

3. *Watching the Application of Special Legislation, Awards or Agreements*; e.g.—

(1) Munitions of War Act; dilution, leaving certificates, etc.

(2) Recruiting; exemptions.

(3) After-war arrangements: demobilisation of war industries, restoration of Trade Union conditions, etc.

4. *Total Hours of Work*.—To discuss any proposed change in the length of the standard week. This could only be done by the workers' committee of an individual firm, provided the change were within the standards fixed by agreement with the local Union or those customary in the trade.

5. *New Processes or Change of Process*.¹—Where the management desire to introduce some process which may throw men out of employment, the whole position should be placed before a shop committee to let the necessity be understood, and allow it to discuss how the change may be brought about with the least hardship to individuals.

[*Note*: In this connection, employers might well give some general guarantees. For example, that the introduction of a new process shall only proceed at such a rate as will allow the surplus workers to be re-absorbed. If this is too sweeping an undertaking, some kind of "leaving bonus" might be guaranteed, or the Union might be re-imbursed for any out-of-work benefit paid to men for a certain period after their discharge. In some way or other, employers will have to undertake greater responsibility than they do now for keeping their men employed.]

6. *Grades of Worker for Types of Machine*.—Due to the introduction of new types of machines, and to the dividing up of processes, with the simplification of manipulation sometimes entailed thereby, the question of the grade of worker to be employed on a given type of machine continually arises. Many such questions are so general as to be the subject of Trade Union negotiation, but

¹ Read and compare: *Labour, Finance, and the War* (pp. 47-50).—[ED.]

many more are quite local to particular firms. For either kind there should be a works committee within the works to deal with their application there.

(b) GRIEVANCES

The quick ventilating of grievances and injustices to individuals or to classes of men is of the greatest importance in securing good feeling. The provision of means for voicing such complaints acts also as a check to petty tyranny, and is a valuable help to the higher management in giving an insight into what is going on.

A shop committee provides a suitable channel in such cases as the following—

- (1) Petty tyranny by foremen.
- (2) Hard cases arising out of too rigid application of rules, etc.
- (3) Alleged mistakes in wages or piece-rate payments.
- (4) Wrongful dismissal (*e.g.*, for alleged disobedience).

In all cases of grievances it is most important that they should be brought forward by some body which cannot be intimidated by shop foremen.

(c) GENERAL SHOP CONDITIONS AND AMENITIES

On all those questions which affect the community life of the factory, the fullest consultation is necessary, and considerable self-government is possible.

The following indicate the kind of question—

1. *Shop Rules*.—Restriction of smoking; tidiness, cleaning of machines, etc.; use of lavatories and cloakrooms; provision, care, and type of overalls; time-booking arrangements; wage-paying arrangements.

2. *Maintenance of Discipline*.—It should be possible to promote such a spirit in a works that, not only could the workers have a say in the drawing up of shop rules, but the enforcing of them could also be largely in their hands. This would be particularly desirable with regard to: Enforcing good timekeeping; maintaining tidiness; use of lavatories and cloakrooms; promoting a high standard of general behaviour.

3. *Working Conditions*.—Meal hours: starting and stopping times; arrangements for holidays, etc.; arrangement of shifts, night work, etc.

4. *Accidents and Sickness*.—Safety appliances and practices; machine guards, etc.; administration of first aid; rest-room arrangements; medical examination and advice.

5. *Dining Service*.—Consultation *re* requirements; criticisms and suggestions of service; control of discipline and behaviour; seating arrangements, etc.

6. *Shop Comfort and Hygiene*.—Suggestions *re* temperature, ventilation, washing accommodation, drying clothes, etc.; provision of seats at work, where possible; drinking water supply.

7. *Benevolent Work*.—Shop collections for charities or hard cases among fellow-workers; sick club, convalescent home, etc.; savings societies.

(d) GENERAL SOCIAL AMENITIES

A works tends to become a centre of social activities having no direct connection with work, for example: Works picnics; games (*e.g.*, cricket, football, etc.); musical societies.

These should all be organised by committees of the workers and not by the management.

2. QUESTIONS ON WHICH JOINT DISCUSSION WOULD PRIMARILY BE OF ADVANTAGE TO THE MANAGEMENT

In this group are those questions with regard to which there is no demand put forward by the workers, but where discussion and explanation on the part of the management would be desirable, and would tend to ease some of the difficulties of management. The institution of works committees would facilitate discussion and explanation in the following instances—

(a) INTERPRETATION OF MANAGEMENT TO WORKERS

In any case of new rules or new developments, or new workshop policy, there is always the greatest difficulty in getting the rank and file to understand what the management is "getting at." However well-meaning the change may be as regards the workers, the mere fact that it is new and not understood is likely to lead to opposition. If the best use is made of committees of workers, such changes, new developments, etc., would have been discussed and explained to them, and it is not too much to expect that the

members of such committees would eventually spread a more correct and sympathetic interpretation of the management's intentions among their fellow-workers than they could get in any other way.

Quick results are not probable, for it must be recognised that it will take some time before the workers generally can be convinced that the management does put all its cards on the table in such discussions. A record of straightforwardness must, however, tell in the long run, just as even a suspicion of breach of faith or "slimness" would spoil all chances of success. It is important to remember in all such discussions that the management will probably possess the most highly trained minds and acutest debating powers. It is easy to score points, but it only leaves resentment in those scored off, and probably immediately raises suspicions of insincerity.

(b) EDUCATION IN SHOP PROCESSES AND TRADE TECHNIQUE

The knowledge of most workers is limited to the process or processes on which they are employed, and they would have a truer sense of industrial problems if they understood better the general technique of the industry in which they are concerned, and the relation of their particular process to others in the chain of manufacture from raw material to finished article.

It is possible that some of this education should be undertaken by technical schools, but their work in this respect can only be of a general nature, leaving still a field for detailed teaching which could only be undertaken in connection with an individual firm or a small group of similar firms. Such education might well begin with the members of the committee of workers, though, if found feasible, it should not stop there, but should be made general for the whole works. Any such scheme should be discussed and worked out in conjunction with a committee of workers, in order to obtain the best from it.

(c) PROMOTION

It is open to question how far the filling of any given vacancy can be discussed openly between the management and those from among whom the promotion to the vacant post will be made.

In connection with such appointments as shop foremen, where the position is usually filled by promoting a workman or "leading hand," it would at least be advisable to announce the appointment to the workers' committee before making it generally known. It would perhaps be possible to explain why the particular choice was made. If not, this could be indicated fairly well by a statement of the qualities which the management deemed necessary for such a post, thereby tending to head off some of the jealous disappointment always involved in such promotions, especially where strict seniority is not followed.

It has, of course, been urged, generally by extremists, that workmen should choose their own foremen by election, but this is not considered practical politics at present, though it may become possible and desirable when workers have had more practice in the exercise of self-management to the limited degree here proposed.

It is quite certain, however, that it is well worth while making some attempt to secure popular understanding and approval of many of the appointments made.

One of the difficulties involved is that there are so many different grades in management, all of which are concerned with a new appointment from a different point of view. For example, in the appointment of a foreman, the workers are concerned as to how far the new man is sympathetic and pleasant and inspiring to work for. The other foremen are concerned with how far he is their equal in education and technical attainments, social standing, length of service (*i.e.*, as to whether he would make a good colleague). The works manager is concerned, among other qualities, with his energy, loyalty to the firm, and ability to maintain discipline. Each of these three grades is looking for three different sets of qualities, and it is not often that a candidate can be found to satisfy all. Whose views should carry most weight: the men's, the other foremen's, or the works manager's?

It should be possible to discuss a vacancy occurring in any grade with all the others in that grade. For example, to discuss with all shop foremen the possible candidates to fill a vacancy among the foremen. This is probably better than no discussion at all, and the foremen might be expected, to some extent, to reflect the feeling among their men. Here, again, the establishing of any

such scheme might well be discussed with the committee of workers.

(d) EDUCATION IN GENERAL BUSINESS QUESTIONS

This point is still more doubtful than the preceding. Employers continually complain that the workers do not understand the responsibilities and the risks which they, as employers, have to carry, and it would seem desirable, therefore, to take some steps to enable them to do so. In some directions this would be quite feasible; *e.g.*—

1. The reasons should be explained and discussed for the establishment of new works departments, or the reorganisation of existing ones, the relation of the new arrangement to the general manufacturing policy being demonstrated.

2. Some kind of simplified works statistics might be laid before a committee of workers. For example—

Output; cost of new equipment installed; cost of tools used in given period; cost of raw material consumed; numbers employed; amount of bad work produced; average wage or earnings of various grades or of various departments.

3. Reports of activities of other parts of the business might be laid before them—

- (1) From the commercial side, showing the difficulties to be met, the general attitude of customers to the firm, etc.

- (2) By the chief technical departments, design office, laboratory, etc., as to the general technical developments or difficulties that were being dealt with. Much of such work need not be kept secret, and would tend to show the workers that *other factors enter into the production of economic wealth besides manual labour.*

4. Simple business reports, showing general trade prospects, might be presented. These are perhaps most difficult to give, in any intelligible form, without publishing matter which every management would object to showing. Still, the attempt would be well worth making, and would show the workers how narrow is the margin between financial success and failure on which most manufacturing businesses work. Such statistics might, perhaps, be expressed not in actual amounts, but as proportions of the wages bill for the same period.

SECTION II

TYPES OF ORGANISATION

Having dealt in the previous section with the kinds of questions, which, judged simply by their nature, would admit of joint discussion or handling, it is now necessary to consider what changes are needed in the structure of business management to carry out such proposals. The development of the necessary machinery presents very considerable difficulties on account of the slowness of action and lack of executive precision which almost necessarily accompany democratic organisation, and which it is the express object of most business organisations to avoid.

The question of machinery for joint discussion and action is considered in this section in three aspects—

1. The requirements which such machinery must satisfy.
2. The influence of various industrial conditions on the type of machinery likely to be adopted in particular trades or works.
3. Some detailed suggestions of shop committees of varying scope.

1. REQUIREMENTS TO BE SATISFIED

(a) *Keeping in Touch with the Trade Union.*—It is obvious that no works committee can be a substitute for the Trade Union, and no attempt must be made by the employer to try to use it in this way. To allay any Trade Union suspicion that this is the intention, and to ensure that the shop committee links up with the Trade Union organisation, it would be advisable to see that the Trade Union is represented in some fairly direct manner. This is specially important for any committee dealing with wages, piece-work, and such other working conditions as are the usual subject of Trade Union action.

In the other direction, it will be necessary for the Trade Unions to develop some means of working shop committees into their scheme of organisation, otherwise there will be the danger of the works committee, able to act more quickly through being on the spot, usurping the place of the local district committee of the Trade Union.

(b) *Representation of All Grades.*—The desirability of having all grades of workers represented on works committees is obvious, but it is not always easy to carry out, owing to the complexity of

the distribution of labour in most works. Thus, it is quite common for a single department, say, in an engineering works, to contain several grades of workers, from skilled tradesmen to labourers, and possibly women. These grades will belong to different Unions, and there may even be different, and perhaps competing, Unions represented in the same grade. Many of the workers also will not be in any Unions at all.

(c) *Touch with Management*.—As a large part of the aim of the whole development is to give the workers some sense of management problems and point of view, it is very desirable that meetings between works committees and management should be frequent and regular, and not looked on merely as means of investigating grievances or deadlocks when they arise. The works committee must not be an accidental excrescence on the management structure, but must be worked into it so as to become an integral part, with real and necessary functions.

(d) *Rapidity of Action*.—Delays in negotiations between employers and labour are a constant source of irritation to the latter. Every effort should be made to reduce them. Where this is impossible, due to the complication of the questions involved, the works committee should be given enough information to convince it of this, and that the delay is not a deliberate attempt to put off the issue.

On the other hand, the desire to attain rapidity of action should not lead to haphazard and "scratch" discussions or negotiations. These will only result in confusion, owing to the likelihood that some of those who ought to take part or be consulted over each question will be left out, or have insufficient opportunity for weighing up the matter. The procedure for working with or through works committees must, therefore, be definite and constitutional, so that every one knows how to get a real grievance or suggestion put forward for consideration, and every one concerned will be sure of receiving due notice of the matter.

The procedure must not be so rigid, however, as to preclude emergency negotiations to deal with sudden crises.

2. INFLUENCE OF VARIOUS INDUSTRIAL CONDITIONS ON THE TYPE OF ORGANISATION OF SHOP COMMITTEES

There is no one type of shop committee that will suit all conditions. Some industries can develop more easily in one direction

and some in another, and in this sub-section are pointed out some of the conditions which are likely to influence this—

(a) *Type of Labour*.—The constitution of works committees, or the scheme of committees, which will suitably represent the workers of any particular factory, will depend very largely on the extent to which different trades and different grades of workers are involved.

In the simplest kind of works, where only one trade or craft is carried out, the workers, even though of different degrees of skill, would probably all be eligible for the same Trade Union. In such a case, a purely Trade Union organisation, but based, of course, on works departments, would meet most of the requirements, and would probably, in fact, be already in existence.

In many works, however, at least in engineering, a number of different trades are carried on. For instance, turning, milling, automatic machine operating, blacksmithing, pattern-making, etc. Many of these trades are represented by the same Trade Union, though the interests of the various sections are often antagonistic (*e.g.*, in the case of turners and automatic machine operators). Some of the other trades mentioned belong to different Unions altogether. In addition to these “tradesmen,” will be found semi-skilled and unskilled labourers. For the most part, these will belong to no Union, though a few may belong to labouring Unions which, however, have no special connection with the engineering Unions. In addition to all these, there may be women, whose position in relation to men’s Unions is still uncertain, and some of whose interests will certainly be opposed to those of some of the men.

The best way of representing all these different groups will depend on their relative proportion and distribution in any given works. Where women are employed in any considerable numbers, it will probably be advisable for them to be represented independently of the men. For the rest, it will probably be necessary to have at least two kinds of works committees: one representing Trade Unionists as such, chosen for convenience by departments; the other representing simply works departments. The first would deal with wages and the type of question usually forming the subject of agreement between employers and trade unions. The other would deal with all other workshop conditions. The first,

being based on Trade Unions, would automatically take account of differences between different trades and different grades; whereas the second would be dealing with those questions in which such distinctions do not matter very much.

(b) *Stability and Regularity of Employment.*—Where work is of an irregular or seasonal nature, and workers are constantly being taken on and turned off, only the very simplest kind of committee of workers would be possible. In such industries probably nothing but a Trade Union organisation within the works would be possible. This would draw its strength from the existence of the Trade Union outside, which would, of course, be largely independent of trade fluctuations, and would be able to reconstitute the works committee as often as necessary, thus keeping it in existence, even should most of the previous members have been discharged through slackness.

(c) *Elaboration of Management Organisation.*—The extent to which management functions can be delegated, or management questions and policy be discussed with the workers, depends very largely on the degree of completeness with which the management is organised. Where this is haphazard and the management consists of a succession of emergencies, only autocratic control is possible, as being the only method which is quick-acting and mobile enough. Therefore, the better organised and more constitutional (in the sense of having known rules and procedure) the management is, the more possible is it for policy to be discussed with the workers.

3. SOME SCHEMES SUGGESTED

The following suggestions for shop organisations of workers are intended to form one scheme. Their individual value, however, does not depend on the adoption of the whole scheme, each being good so far as it goes.

(a) *Shop Stewards' Committee.*—As pointed out in the last subsection, in a factory where the Trade Union is strong, there will probably be a Shop Stewards' or Trade Union committee already in existence. This is, of course, a committee of workers only, elected generally by the Trade Union members in the works, to look after their interests and to conduct negotiations for them with the management. Sometimes the stewards carry out other purely

Trade Union work, such as collecting subscriptions, obtaining new members, etc. Such a committee is the most obvious and simplest type of works committee; and where the composition of the shop is simple (*i.e.*, mainly one trade, with no very great difference in grade), a Shop Stewards' Committee could handle many of the questions laid down as suitable for joint action.

It is doubtful, however, whether the Shop Stewards' Committee can, or should, cover the full range of workers' activities, except in the very simplest type of works. The mere fact that, as a purely Trade Union organisation, it will deal primarily with wages and piece-work questions, will tend to introduce an atmosphere of bargaining, which would make the discussion of more general questions very difficult. Further, such a committee would be likely to consider very little else than the interests of the Trade Union, or of themselves as Trade Unionists. While this is no doubt quite legitimate as regards such questions as wages, the more general questions of workshop amenities should be considered from the point of view of the works as a community in which the workers have common interests with the management in finding and maintaining the best conditions possible.

The Shop Stewards' Committee, in the engineering trade at least, is fairly certain to constitute itself without any help from the management. The management should hasten to recognise it, and give it every facility for carrying on its business, and should endeavour to give it a recognised status and to impress it with a sense of responsibility.

It would probably be desirable that Shop Stewards should be elected by secret ballot rather than by show of hands in open meeting, in order that the most responsible men may be chosen and not merely the loudest talkers or the most popular. It seems better, also, that stewards should be elected for a certain definite term, instead of holding office, as is sometimes the case now, until they resign, leave the firm, or are actually deposed. The Shop Stewards' Committee, being entirely a workers' and Trade Union affair, both these points are outside the legitimate field of action of the management. The latter's willingness to recognise and work through the committee should, however, confer some right to make suggestions even in such matters as these.

The facilities granted by the management might very well include

a room on the works premises in which to hold meetings, and a place to keep papers, etc. If works conditions make it difficult for the stewards to meet out of works hours, it would be well to allow them to hold committee meetings in working hours at recognised times. The management should also arrange periodic joint meetings with the committee, to enable both sides to bring forward matters for discussion.

The composition of the joint meeting between the Committee of Shop Stewards and the management is worth considering shortly. In the conception here set forth, the Shop Stewards' Committee is a complete entity by itself; it is not merely the workers' section of some larger composite committee of management and workers. The joint meetings are rather in the nature of a standing arrangement on the part of the management for receiving deputations from the workers. For this purpose, the *personnel* of the management section need not be fixed, but could well be varied according to the subjects to be discussed. It should always include, however, the highest authority directly concerned with the works. For the rest, there might be the various departmental managers, and possibly, sometimes, some of the foremen. As the joint meeting is not an instrument of management, taking decisions by vote, the number of the management contingent does not really matter, beyond assuring that all useful points of view are represented.

Too much importance can hardly be laid on the desirability of *regular* joint meetings, as against *ad hoc* meetings called to discuss special grievances. According to the first plan, each side becomes used to meeting the other in the ordinary way of business, say, once a month, when no special issue is at stake and no special tension is in the air. Each can hardly fail to absorb something of the other's point of view. At a special *ad hoc* meeting, on the other hand, each side is apt to regard as its business, not the discussion of a question on its merits, but simply the making out of a case. And the fact that a meeting is called specially means that expectations of results are raised among the other workers, which make it difficult to allow the necessary time or number of meetings for the proper discussion of a complicated question.

Where women are employed in considerable numbers with men, the question of their representation by stewards becomes important. It is as yet too early to say how this situation can best be met.

If they are eligible for membership of the same Trade Unions as the men, the Shop Stewards' Committee might consist of representatives of both. But, considering the situation which will arise after the war, when the interests of the men and of the women may often be opposed, this solution does not seem very promising at present.

Another plan would be for a separate Women's Shop Stewards' Committee to be formed, which would also meet the management periodically and be, in fact, a duplicate of the men's organisation. It would probably also hold periodic joint meetings with the men's committee, to unify their policies as far as possible. This plan is somewhat cumbersome, but seems to be the only one feasible at present, on account of the divergence of interest, and the very different stage of development reached in the organisation of men and women.

(b) *Social Union*.—Some organisation for looking after recreations is in existence in many works, and if not, there is much to be said for the institution of such a body as the Social Union here described.

Although the purpose which calls together the members of a works community is, of course, not the fostering of social life and amenities, there is no doubt that members of such communities do attain a fuller life and more satisfaction from their association together, when common recreation is added to common work. It may, of course, be urged against such a development of community life in industry that it is better for people to get away from their work and to meet quite another set in their leisure times. This is no doubt true enough, but the number of people who take advantage of it is probably very much less than would be affected by social activities connected with the works. The development of such activities will, in consequence, almost certainly have more effect in widening opportunities for fuller life than it will have in restricting them. Moreover, if the works is a large one, the differences in outlook between the various sections are perhaps quite as great as can be met with outside. For this reason, the cardinal principle for such organisations is to mix up the different sections and grades, especially the works and the office departments.

The sphere of the Social Union includes all activities other than those affecting the work for which the firm is organised. This

sphere being outside the work of the firm, the organisation should be entirely voluntary and in the hands of the workers, though the management may well provide facilities, such as rooms and playing-fields.

Two main schemes of organisation are usual. In the first, a general council is elected by the members, or, if possible, by all the employees, irrespective of department or grade. This council is responsible for the general policy of the Social Union, holds the funds, and is responsible for starting and supervising smaller organisations for specific purposes. Thus, for each activity a club or society would be formed under the auspices of the council. The clubs would manage their own affairs and make their own detailed arrangements.

It is most desirable that the Social Union should be self-supporting as far as running expenses go, and should not be subsidised by the management, as is sometimes done. A small subscription should be paid weekly by every member, such subscription entitling them to membership of any or all clubs. The funds should be held by the council, and spent according to the needs of the various clubs, not according to the subscriptions traceable to the membership of each. This is very much better than making the finances of each club self-supporting, since it emphasises the "community" feeling, is very simple, and enables some forms of recreation to be carried on which could not possibly be made to pay for themselves.

The second general type of Social Union organisation involves making the clubs themselves the basis. Each levies its own subscriptions and pays its own expenses, and the secretaries of the clubs form a council for general management. This is a less desirable arrangement, because each member of the council is apt to regard himself as there only to look after the interests of his club, rather than the whole. The starting of new activities is also less easy than under the first scheme.

(c) *Welfare Committee*.—The two organisations suggested so far, viz., Shop Stewards' Committee and Social Union, do not cover the whole range of functions outlined in Section I. In considering how much of that field still remains to be covered, it is simplest first to mark off, mentally, the sphere of the Social Union, viz., social activities, outside working hours. This leaves clear the real

problem, viz., all the questions affecting the work and the conditions of work of the firm. These are then conceived as falling into two groups. First, there are those questions in which the interests of the workers are mainly, or appear to be, opposed to those of the employer. These are concerned with such matters as wage and piece-rates, penalties for spoiled work, etc. With regard to these, discussion is bound to be of the nature of bargaining, and these are the field for the Shop Stewards' Committee, negotiating by means of the periodical joint meetings with the management.

There remains, however, a second class of question, in which there is no clash of interest between employer and employed. These are concerned mainly with regulating the "community life" of the works, and include all questions of general shop conditions and amenities, and the more purely educational matters. For dealing with this group, a composite committee of management and workers, here called the Welfare Committee, is suggested. This would consist of two parts—

- (1) Representatives elected by workers; and
- (2) Nominees of the management.

The elected side might well represent the offices, both technical and clerical, as well as the works; and members would be elected by departments, no account being taken of the various grades. Where women are employed, it would probably be desirable for them to elect separate representatives. If they are in departments by themselves, this would naturally happen. If the departments are mixed, the men and women of such departments would each send representatives.

The Trade Union or Unions most concerned with the work of the firm should be represented in some fairly direct way. This might be done in either of two ways—

1. If a Shop Stewards' Committee exists, it might be asked to send one or more representatives.
2. Or each of the main Trade Unions represented in the works might elect one or more representatives to represent their members as Trade Unionists.

The management section should contain, in general, the highest members of the management who concern themselves with the running of the works. It would be no use to have on this section men in subordinate positions, as much of the discussion would

deal with matters beyond their jurisdiction. Moreover, the opportunity for the higher management to get into touch with the workers would be too important to miss. It is doubtful whether there is any need for the Workers' section of the Welfare Committee to meet separately, though a good many questions can be handed over by the joint meeting to sub-committees for working out, and such sub-committees can, where desirable, consist entirely of workers.

It may be urged that the Welfare Committee is an unnecessary complication; either its work could be carried out by the Shop Stewards' Committee, or the work of both could be handled by a single composite Shop Committee of Management and Workers. In practice, however, a committee of the workers sitting separately to consider opposing interests, with regular deputations to the management; and a composite committee of workers and management sitting together to discuss common interests would seem the best solution of a difficult problem.

Everything considered, therefore, there seems, in many works at least, to be a good case for the institution of both organisations, that of the Shop Stewards and that of the Welfare Committee. The conditions making the latter desirable and possible would seem to be—

1. A management sufficiently methodical and constitutional to make previous discussion of developments feasible.
2. The conditions of employment fairly stable.
3. The trades and grades represented in the shop too varied and intermixed to make full representation by a committee of Trade Union Shop Stewards possible.

SECTION III

SUMMARY AND CONCLUSIONS

Gathering together the views and suggestions made in the foregoing pages, it is felt that three separate organisations within the works are necessary to represent the workers in the complicated and elaborate organisms towards which modern factories tend.

It is not sufficient criticism of such a proposal to say that it is too complicated. Modern industry is complicated, and the attempt

to introduce democratic ideas into its governance will necessarily make it more so. As already pointed out, the scheme need not be accepted in its entirety. For any trade or firm fortunate enough to operate under simpler conditions than those here assumed, only such of the suggestions need be accepted as suit its case.

The scope of the three committees is shown by the following summary—

(a) SHOP STEWARDS' COMMITTEE

Sphere.—Controversial questions where interests of employer and worker are apparently opposed.

Constitution.—Consists of Trade Unionists' workers, elected by Works Departments.

Sits by itself, but has regular meetings with the management.

Examples of Questions dealt with.—Wage and piece rates.

The carrying out of Trade Union agreements.

Negotiations as to the application of legislation to the workers represented (*e.g.*, dilution, exemption from recruiting).

The carrying out of national agreements as to the restoration of Trade Union conditions; demobilisation of war industries; etc.

Introduction of new processes.

Ventilation of grievances as to any of above.

(b) WELFARE COMMITTEE

Sphere.—"Community" questions, where there is no clash between interests of employer and worker.

Constitution.—Composite committee of management and workers, with some direct representation of Trade Unions.

Sits as one body, with some questions relegated to sub-committees, consisting either wholly of workers or of workers and management, according to the nature of the case.

Examples of Questions dealt with.—Shop rules.

Such working conditions as starting and stopping times, meal hours, night-shift arrangements, etc.

Accident and sickness arrangements.

Shop comfort and hygiene.

Benevolent work, such as collections for charities, hard cases of illness or accident among the workers themselves,

Education schemes: Trade technique; new works developments; statistics of works activity; business outlook.

Promotions: explanation and, if possible, consultation.

Ventilation of grievances concerning any of above.

(c) SOCIAL UNION

Sphere.—Social amenities, mainly outside working hours.

Constitution.—Includes any or all grades of management and workers.

Governing body elected by members irrespective of trade, grade, or sex.

Examples of Activities.—Institution of clubs for sports: cricket, football, swimming, etc.

Recreative societies: orchestral, choral, debating, etc.

Arranging social events: picnics, dances, etc.

Provision of games, library, etc., for use in meal hours.

Administration of club rooms.

SECTION IV

COMMENTS ON WORKING

An attempt to institute a scheme of shop committees on the lines of those here described, revealed certain partially unexpected difficulties, of which the following are instances—

1. RELATION WITH SHOP FOREMEN

If a Works Committee deals with the actual conditions under which work is carried on, and if its work is to be real, there is every probability of friction arising owing to the committee infringing the sphere of authority of the shop foremen. Not only will specific complaints, and objections to actions or decisions of foremen, be brought up, but more general questions of shop management will be discussed, on which the foremen would naturally expect to be consulted, previously, to their men.

It is hardly possible, except in very small works, to make all shop foremen members of a Works Committee, for two reasons—

1. The management should be represented by the highest active works officials of the firm, and to include the foremen would

probably involve including a number of other grades of management in between these two extremes, which would make the committee too cumbersome.

2. Discussion would be less free if shop foremen were present, as they could hardly avoid being on the look-out for attacks upon their authority. Indeed, one of the main advantages of a Works Committee scheme is the opportunity for the workers occasionally to get past the foremen into direct touch with the higher management.

It must not be forgotten, however, that the foremen have definite management functions to perform which cannot be discharged if their authority is continually called in question, or if they are continually harassed by complaints behind their backs. Nor can they have any prestige if arrangements or rules affecting their control or method of management are made without them having their full share in the discussion of them. The difficulty arises, therefore, how, on the one hand, to maintain the foremen's position as a real link in the chain of executive authority; and, on the other hand, to promote direct discussion between the workers and the higher management. The solving of this difficulty depends on the devising of suitable procedure and machinery for keeping the lower grades of management in touch with the upper, and for confining the activities of the Works Committee to a fairly definite and known sphere.

The exact nature of this machinery would depend on the organisation of particular firms, but some suggestions may be useful. It will be advisable, for instance, to lay down that previous notice shall be given of all subjects to be brought up at a Works Committee meeting, so that a full agenda may be prepared. This agenda should then be circulated freely among the shop foremen, and others of the lower grades of management, so that they may know what is going forward. Full minutes of the proceedings of all meetings should be kept, and these again should be circulated to all grades of management.

To facilitate such arrangements, it may be advisable for the management to provide a secretary whose duties would be two-fold: the preparation of the agenda and the writing out and following up of the minutes. In drawing up the agenda, the secretary should make full enquiries with regard to all subjects brought

forward by workers, and should prepare a short statement of each case to issue with the agenda. The secretary, in circulating the agenda, would then be able to learn, from the foremen and others, to what extent each was interested or concerned in each particular item. Those specially concerned might then be invited to attend the meeting to take part in the discussion. If a foreman intimated that he had decided views on some subject and wished them to be taken into account, discussion at the meeting should be of a preliminary nature only and limited to eliciting the full case as seen by the workers. Further discussion with the committee would be reserved until the management had had time to consult the foremen or others concerned.

The certainty, on the part of all grades of management, that no subject would be discussed of which they had not had notice; the privilege of having final discussion of any subject postponed, pending the statement of their views; and finally the circulation of all minutes, showing what took place at the meetings, should go a long way towards reconciling the shop foremen and lower grades of managements to Works Committees.

A simpler way to tackle this difficulty would be to lay down that the function of joint meetings of management and representatives of workers was *consultative* and *advisory* only, and that management decisions only carried executive authority when taken at management meetings, to which the result of the joint meeting with the workers would have to be referred. Such decisions would, of course, be carried into effect through the ordinary channels of authority. This policy would provide a safe and easy beginning, but is not of itself desirable, as one of the aims of the whole movement should be to devolve some real authority and power from the management to the workers.

2. PROVISION OF FACILITIES FOR COMMITTEE WORK

For any recognised Works Committees, the management should see that they have such facilities put at their disposal as will enable them to carry out their work, and will give them standing and authority in the works community. In the case of committees dealing with social work outside the direct work of the shop, all meetings and work can be expected to take place outside working hours. This should also apply in a general way to meetings of

Shop Stewards or of the Welfare Committee; but it may happen, as, for instance, where a night-shift is being worked, that it is almost impossible for the members to get together except at some time during working hours. In such cases, permission should be given for meetings at regular stated times, say, once a fortnight, or once a month, and the attendance at these meetings would be considered parts of the ordinary work of the members, and they would be paid accordingly. Where possible, however, it is very much better for meetings to be arranged entirely outside working hours, in which case no payment should be offered, the work being looked on as in the nature of voluntary public work.

A committee room should be provided; and in the case of the Welfare Committee, the secretary might also be provided by the management. For firms suitably placed, it is most desirable that a playing-field should be provided, suitably laid out for various games. Rent can be asked for it by the management if thought desirable, and can be paid by a Social Union such as that described here. In the case of all kinds of recognised Works Committees, the object to aim at is to make their work an integral part of the organisation of the works community, providing whatever facilities are needed to make their work effective. On the other hand, anything like subsidising of Works Committees by the management must be avoided.

CHAPTER V

THE EFFECTS OF THE WAR ON CREDIT, CURRENCY, AND FINANCE

Research Committee appointed by the Economic Section

Chairman, Professor W. R. Scott. *Secretary*, Mr. J. E. Allen. Professor C. F. Bastable, Sir E. Brabrook, C.B., Professor Lawrence R. Dicksee, Mr. Barnard Ellinger, Mr. A. H. Gibson, Professor E. C. K. Gonner, Mr. F. W. Hirst, Professor A. W. Kirkaldy, Professor J. Shield Nicholson, Sir R. H. Inglis Palgrave, F.R.S., and Mr. E. Sykes.

Report of the Research Committee of the British Association for the Advancement of Science on Economic and Financial Conditions ruling during the third year of war, 4th August, 1916-4th August, 1917.

SECTION A

INTRODUCTION

THE third year of war, with one or two exceptions, has not brought any further fundamental changes in the structure of Credit, Currency, and Finance, its effect being more to crystallise or accentuate the new and now familiar conditions created during the first two years of war. The Committee presents its third report mainly in the form of a review of events and of the minor changes that have taken place since the presentation of the second report to the Association at Newcastle in September, 1916. The first part of the report contains a review of the more important events in the third year of war grouped together under various convenient headings, comparative statistics relating to past years being introduced where available.

The question of Income Tax reform, although closely connected with the general question of National Expenditure and Taxation, which is discussed later in this report, appeared so complex, that the Committee resolved to refer it to a special Sub-Committee. The Sub-Committee will, it is hoped, present its report in a few months' time.

It is gratifying to the Committee to find that many of the recommendations and opinions expressed by the Committee in its two former reports have since been heartily endorsed by Government action, by public speeches of Ministers and of eminent bankers, and by many important conferences and associations of capital and labour. In particular, there has been a growing recognition of the grave economic dangers incident to financing the war by too great an extension of bank credit, instead of by direct subscriptions from the public, and an awakening of capital and labour to the economic truism that in peace time as in war time their joint interests and that of the community as a whole are best served by good real wages and increased production.

At the end of the report the Committee records its considered conclusions on certain economic questions of national importance likely to be in the forefront of Parliamentary and public discussion after the declaration of peace. The Committee is greatly indebted to the following correspondents for highly esteemed opinions and valuable data on these important questions—

Sir Hugh Bell

Professor E. Cannan

Mr. E. L. Franklin

Mr. R. Graham

Mr. W. F. Spalding

The other members of the Committee wish to record their thanks to Mr. A. H. Gibson for his numerous and carefully compiled tables of statistics.

I. POLITICAL EVENTS

It is not within the Committee's reference to review political events unless they have, or may have in the future, a wide influence on the economic or financial side of the war. At least three, possibly four, such events occurred during the third year of war, and are, therefore, here fittingly recorded in brief.

The first political event of foremost importance was the resignation on Tuesday, 5th December, 1916, of the late Ministry under the Premiership of Mr. Asquith. Events immediately preceding or contemporary were the rapid march of Germany through portions of Roumania, the capture of Bucharest, the unsatisfactory position at Athens, and increased destruction of shipping by the German submarines. The new War Cabinet was completed on Friday, 8th December, 1916, under the Premiership of Mr. Lloyd George,

the official list of new Ministers being published on Sunday, 10th December, 1916. The new Cabinet consisted at first of only five members, the remaining Ministers, though holding positions as heads of departments, having no voice in its decisions. Several business men were included in the Ministry.

The greatest political event of the year has been the revolution in Russia, startling in its suddenness and fraught with infinite possibilities, and culminating in the abdication of the Czar, which was announced in the British House of Commons on Tuesday, 15th March, 1917. At the time of the preparation of this report, it is not possible to state the ultimate bearing of the revolution on the military plans and position of the Allies; but whatever the degree of such influence, it is bound to exert some re-percussion on economic and financial conditions in this country.

The third great political event of the third year of war may be said to be the declaration made by the United States of America on Thursday, 5th April, 1917, that a state of war existed between her and Germany. Diplomatic relations between the two countries had been severed by the United States since Saturday, 3rd February, because Germany announced on Thursday, 1st February, to all neutral countries that she would henceforth sink, without warning, every vessel (including those of neutral countries) which she found in certain designated barred zones around the United Kingdom, France, and Italy, and in the Eastern Mediterranean, a threat which was quickly carried into effect on a large scale. The entry of the United States into the war has enormously strengthened the economic resources of the Allies.

The German Chancellor announced in the Reichstag on Tuesday, 12th December, 1916, that it was the intention of the Governments of Germany and of her Allies to make certain peace proposals to Great Britain, France, Russia, and their Allies. Six days later, on Monday, 18th December, 1916, the so-called German peace note was received from the American Ambassador. The proposals of Germany amounted to nothing more than a suggestion for a conference, and was accompanied by a bombastic statement of the great military victories already achieved by Germany. On the following day, Tuesday, 19th December, 1916, Mr. Lloyd George, the new Premier, in the House of Commons effectively replied to the German proposal for negotiation. In brief, his reply

informed Germany that the Allies were not prepared to negotiate for peace until Germany was ready to agree to give restitution and reparation as regards the past and guarantees against repetition in the future, essential conditions previously laid down by the late Premier (Mr. Asquith).

Up to the publication of this report, no definite peace terms have been suggested by Germany. Early in August, however, at the beginning of the fourth year of war, the Pope addressed a Note to each of the belligerent nations pleading for peace. In effect, though, of course, not in terms, the Papal Note supports the case of the Entente Powers, since it proposes the restoration of Belgium and northern France, and in other details goes far to satisfy the claims of our other Allies. The replies of the Austrian and German Emperors, published in the middle of September, were silent on the vital question of Belgium.

II. THE ECONOMIC PROBLEM OF SUPPLIES

When future historians come to write a complete account of the Great War, they will doubtless agree that superiority in supplies exercised a considerable influence in deciding the issue of the conflict. The calls on productive power have increased so rapidly during hostilities, that the war has largely resolved itself into a conflict between economic forces. It is obvious that the limit of economic endurance depends not only on the amount of available resources, but also on the proper application of the resources.

Modern warfare demands the expenditure of a vast amount of heavy munitions of war. An enormous transport organisation is required to bring munitions and foodstuffs within reach of the fighting forces. To make the transport facilities effective at all parts of the fighting front, new railways, bridges, and roads have to be constructed on an unprecedented scale, as near to the positions of the army and guns as possible. A great transport organisation necessarily makes heavy demands on rolling stock and transport vehicles of all types. Moreover, the present war has introduced numerous new engines of destruction, all of which consume a vast amount of labour in their production. In fact, so great has been the economic strain caused by the present colossal war, particularly during its third year, that it has severely

taxed the productive power of the whole world to keep pace with its requirements.

Our national energy in war time is absorbed in six main channels, namely—

1. Fighting forces and services accessory to fighting.
2. Warships and mercantile ships.
3. Munitions and transport material.
4. Food and clothing for those engaged in fighting or performing services accessory to fighting.
5. Food and clothing for the civilian population.
6. Manufacturing articles for export for indirect exchange of those enumerated under 3, 4, and 5.

All these six factors tend to compete with one another in their demands on labour and material resources, and call for the most scientific mobilisation of labour and economy in resources. Warfare demands increased national production and reduced consumption by the civilian population.

During the third year of war there was undoubtedly a national awakening to the importance to be attached to the economic as well as to the military and naval conflict. The early months of the third year of war were marked by an insistent public call for more energetic action of every kind by the Government in the prosecution of the war and the exercise of economy with regard to the national resources. It was the recognition of the fact that the United Kingdom had not hitherto during the war put forth the maximum amount of energy, combined with the most skilful mobilisation of resources, that she was capable of that was one of the main causes that led to the downfall of the late Ministry in early December, 1916.

The new Prime Minister (Mr. Lloyd George), in a speech defining his war policy, stated in the House of Commons on Tuesday, 19th December, that the task of the Government was to complete and make even more effective the mobilisation of all our resources. He also announced that the War Cabinet had decided that the time had come for adopting the principle of universal national service, and that Mr. Neville Chamberlain had been appointed Director-General of National Service. The intention was that labour should be set free from non-essential industries and be invited to enrol for war work. In a reference to shipping, the

Prime Minister stated that the time had come to take more complete control over all ships and to place them practically in the same position as the railways. With regard to mines, he announced that the Government felt that they ought to assume a more direct control over the whole mining industry—an industry which was absolutely indispensable to the effective carrying on of the war. In the matter of food, he announced that “over-consumption by the fortunate must not be allowed to create a shortage for the less well-to-do”; and that when we come to production, “every available square yard must be made to produce food.”

Notwithstanding that the new Ministry commenced office with such good resolutions, it has only been partly successful from an economic standpoint, in its foremost resolution, “to complete and make even more effective the mobilisation of all our resources.”

Each successive Ministry during the war has failed to realise that if the needs of a great army in war time are to be adequately supplied, the civilian population must be made not only to increase production, but to reduce its pre-war standard of comfort and amusement. It is quite as much the duty of the Government of a country to compel civilians to work harder and practise self-denial, as it is to call upon fit men of military age for fighting purposes, often to make the supreme sacrifice. Drastic economy admittedly means individual inconvenience, and even suffering; but these are small sacrifices compared with those already and still being cheerfully borne by our heroic soldiers. During its tenure of office the present Ministry has admittedly issued innumerable orders, in an endeavour to increase production, to reduce consumption in certain articles, to stop speculation in commodities, to stop excessive profits arising out of trading in the necessities of life, and for other economic objects. The main point for economic criticism is that the Government has not been sufficiently drastic in its measures to enforce material and equitable reduction in consumption of goods and services, and diversion of labour from unnecessary to necessary production and services in war time. War conditions demand fighting men, goods, and services: all other factors are of secondary importance.

The main economic measures that were introduced during the third year of war, we briefly enumerate below—

On Wednesday, 15th November, 1916, the President of the

Board of Trade announced that the Government would appoint a Food Controller, with wide powers to co-ordinate the activities of the various departments then dealing with food questions; later, Lord Devonport was appointed. The various restrictions imposed during his tenure of office on the consumption of food in hotels, restaurants, clubs, and tea-shops hardly touched the main problem—the urgent necessity for material all-round reduction in consumption. Lord Devonport resigned the post of Food Controller on Thursday, 31st May, and was succeeded by Lord Rhondda on Friday, 15th June.

The Prime Minister announced to the House of Commons on 23rd February severe restrictions on the import of many classes of articles, save under special licences, with the avowed intention of reserving mercantile tonnage for the carriage of more essential goods.

Germany announced on Thursday, 1st February, that she would henceforth sink, without warning, every vessel which she found in certain designated barred zones.

So far, the intensified submarine campaign has met with only a limited amount of success, as will be evident from the tables given on pages 194 and 195.

The first table shows that the greatest destruction of British shipping took place during the three weeks ending 6th May, from which time the Allied Navy appears to have secured more control over the depredations of the enemy's submarines.

In the House of Commons on Thursday, 16th August, the Prime Minister gave the following particulars concerning the total tonnage of British shipping losses—

	<i>Tons.</i>
Gross losses in April (worst month)	560,000
Gross losses in July	320,000
Average net monthly losses (gross losses less tonnage of new ships built) for six months: February to July (under).	250,000

On Wednesday, 11th April, a Corn Production Bill was issued, which guaranteed minimum prices for home-grown wheat and oats for each of the years 1917–1922 inclusive. The Bill provided for a minimum wage of 25s. per week for agricultural labourers, and for restricting the power of landlords to raise the rents of existing tenants. The object of the Bill is to encourage home production of wheat and oats, particularly during next year. After certain

BRITISH SHIPPING LOSSES

BRITISH MERCHANT VESSELS SUNK BY MINE OR SUBMARINE

Week ending	Of 1,600 tons gross or over.	Under 1,600 tons gross.	Fishing Vessels sunk.
1917.			
Feb. 25	16	6	5
Mar. 4	15	8	2
" 11	12	4	3
" 18	18	8	21 ¹
" 25	20	7	14 ²
Apr. 1	17	14	3
" 8	17	2	7
" 15	19	9	11
" 22	41	15	10
" 29	39	12	7
May 6	19	22	15 ³
" 13	17	5	3
" 20	18	9	3
" 27	18	2	2
June 3	15	3	5
" 10	24	10	6
" 17	25	5	0
" 24	21	6	0
July 1	16	5	12
" 8	13	3	6
" 15	15	4	8
" 22	19	3	1
" 29	20	3	0
Aug. 5	20	3	0

amendments, the Bill passed through its final stage in the House of Lords on Friday, 17th August.

On Wednesday, 20th December, the Government announced a material restriction of train services, and a 50 per cent. increase in certain passenger fares after 1st January, 1917. Shortage of labour on the railways and the necessity of transporting part of the existing railway material and employees to France were the reasons assigned for this measure.

An announcement was made on Monday, 23rd April, to the effect that from the following Monday all the principal flour mills throughout the country would be taken over by the Food Controller. The Order applied to all flour mills of the United Kingdom

¹ Includes 17 sailing craft.

² Includes 9 sailing craft.

³ Includes 13 sailing craft.

BRITISH SHIPPING LOSSES

NUMBER OF ARRIVALS AND SAILINGS OF MERCHANT VESSELS OF ALL NATIONALITIES (OVER 100 TONS NET) AT AND FROM UNITED KINGDOM PORTS (EXCLUSIVE OF FISHING AND LOCAL CRAFT)—

Week ending	Arrivals.	Sailings.	Unsuccessfully attacked.
1917.			
Feb. 25 . . .	2,280	2,261	16
Mar. 4 . . .	2,528	2,477	14
" 11 . . .	1,985	1,959	12
" 18 . . .	2,528	2,554	21
" 25 . . .	2,314	2,433	11
Apr. 1 . . .	2,281	2,399	20
" 8 . . .	2,406	2,367	13
" 15 . . .	2,379	2,331	13
" 22 . . .	2,585	2,621	29
" 29 . . .	2,716	2,690	29
May 6 . . .	2,374	2,499	30
" 13 . . .	2,568	2,552	15
" 20 . . .	2,664	2,759	9
" 27 . . .	2,719	2,768	21
June 3 . . .	2,693	2,642	15
" 10 . . .	2,767	2,822	20
" 17 . . .	2,897	2,993	37
" 24 . . .	2,876	2,923	19
July 1 . . .	2,745	2,846	14
" 8 . . .	2,898	2,798	16
" 15 . . .	2,828	2,920	11
" 22 . . .	2,791	2,791	16
" 29 . . .	2,747	2,776	12
Aug. 5 . . .	2,673	2,796	11

using wheat in the making of flour, except those whose output capacity is less than five sacks of flour per hour. By a second Flour Mills Order dated 31st July, the Food Controller took over all flour mills, irrespective of output.

In concluding this section on the Economic Problem of Supplies, we desire to place on record our appreciation of the splendid appeal which President Wilson addressed to all American citizens in the middle of April. The full text of this personal appeal we give at the end of this section. It displays a very close grip of economic problems under conditions of war: the President clearly perceives that pressing industrial, agricultural, and economic problems must first be solved if naval and military forces are to have the opportunity of victory.

PRESIDENT WILSON'S APPEAL TO AMERICAN CITIZENS

On Monday, 16th April, 1917, President Wilson issued a strong personal appeal to all American citizens—men, women, and children—to join together to unite the nation for the preservation of its ideals and for the triumph of democracy in the world-war. The text of the appeal was as follows—

FELLOW-COUNTRYMEN,—The entrance of our beloved country into the grim and terrible war for democracy and human rights, which has shaken the world, creates so many problems of national life and action which call for immediate consideration and settlement, that I hope you will permit me to address you a few words of earnest counsel and appeal with regard to them.

We are rapidly putting our Navy upon an effective war footing, and are about to create and equip a great Army, but these are simply parts of the great task to which we have addressed ourselves. There is not a single selfish element, so far as I can see, in the cause we are fighting for. We are fighting for what we believe and wish to be the rights of mankind and the future peace and security of the world. To do this great thing worthily and successfully we must devote ourselves to service without regard to profit or material advantage, and with an energy and intelligence that rise to the level of the enterprise itself. We must realise to the full how great the task is, how many things, how many kinds of elements of capacity, service, and self-sacrifice it involves.

THE THINGS TO DO WELL

These, then, are the things we must do, and do well, besides fighting—the things without which mere fighting would be fruitless.

We must supply abundant food, not only for ourselves, and for our Armies and our seamen, but also for a large part of the nations with whom we have now made common cause, in whose support and by whose sides we shall be fighting.

We must supply ships by hundreds out of our shipyards to carry to the other side of the sea—submarines or no submarines—what will every day be needed there, and abundant materials out of our fields, mines, and factories, with which, not only to clothe and equip our own forces on land and sea, but also to clothe and support our people for whom the gallant fellows under arms can no longer work; to help clothe and equip the Armies with which we are co-operating in Europe; and to keep the looms and manufactories there in raw material—coal to keep the fires going in ships at sea, and the furnaces in hundreds of factories across the sea: steel out of which to make arms and ammunition both here and there: rails for worn-out railways at the back of the fighting fronts: locomotives and rolling-stock to take the place of those every day going to pieces: mules and horses and cattle for military service—everything with which the people of England, France, Italy, and Russia have usually supplied themselves, but cannot now afford the men, materials, or machinery to make.

It is evident to every thinking man that our industries on farms, in shipyards, mines, and factories must be made more prolific, and more efficient than ever, and must be more economically managed, and better adapted to the particular requirements of our task than they have been; and what I want to say is that men and women who devote their thought and energy to these things will be serving their country and conducting the fight for peace and freedom just as truly and just as effectively as men on the battlefield or in the trenches. The industrial forces of the country, men and women alike, will be a great international service army—a notable honoured host engaged in the service of the nation and the world, the efficient friends and saviours of free men everywhere. Thousands, nay hundreds of thousands of men, otherwise liable to military service, will, of right and necessity, be excused that service and assigned the fundamental sustaining work of fields, factories, and mines; and they will be as much part of the great patriotic forces of the nation as the men under fire.

FOOD AND THE FATE OF NATIONS

I take the liberty, therefore, of addressing this word to the farmers of the country and all those who work on farms. *The supreme need of our own nation, and of the nations with whom we are co-operating, is an abundance of supplies, especially foodstuffs.* The importance of an adequate food supply in the present year is superlative. Without abundant food, alike for the armies and people now at war, the whole great enterprise upon which we have embarked would break down and fail. The world's food reserves are low. Not only during the present emergency, but for some time after peace shall have come, both our own people and a large proportion of the people of Europe must rely on the harvests of America. Upon the farmers of this country, therefore, in a large measure rests the fate of the war—the fate of nations. May the nation not count upon them to omit no step that will increase the production of their land, or bring about the most effectual co-operation in the sale and distribution of their products?

The time is short, and it is of the most imperative importance that everything possible be done, and done immediately, to make sure of large harvests. The call upon young men and old alike, and upon able-bodied boys on the land to accept and act upon this duty—to turn in hosts to the farms to make certain no pains and no labour are lacking in this great matter. I particularly appeal to farmers in the South to plant abundant foodstuffs as well as cotton. They can show their patriotism in no better and more convincing way than by resisting the great temptation of the present price of cotton, and by helping upon a great scale to feed the nation and peoples everywhere who are fighting for their liberties and our own. The variety of their crops will be a visible measure of their comprehension of their national duty.

A CALL TO MIDDLEMEN

The Government of the United States and the Governments of several States stand ready to co-operate. They will do everything possible to assist farmers in securing an adequate supply of seed, an

adequate force of labourers when they are most needed at harvest time, and means for expediting the shipments of fertilisers and farm machinery, as well as the crops themselves when they are harvested. The course of trade shall be as unhampered as it is possible to make it, and there shall be no unwarranted manipulation of the nation's food supply by those who handle it on its way to the consumer. This is our opportunity to demonstrate the efficiency of a great Democracy, and we shall not fall short in this. Let me say to middlemen of every sort, whether they are handling our foodstuffs, our raw materials of manufacture, or the products of our mills and factories: The eyes of the country will be especially upon you. This is your opportunity for signal service, efficient and disinterested. The country expects you, as it expects all others, to forego unusual profits, to organise and expedite the shipment of supplies of every kind, but especially food, with an eye to the service you are rendering and in the spirit of those who enlist in the ranks for their people not for themselves. I shall confidently expect you to deserve and win the confidence of the people of every sort and station.

To men who run the railways of the country, whether they be managers or operative employees, let me say that railways are the arteries of the nation's life, and that upon them rests the immense responsibility of seeing to it that these arteries suffer no obstruction of any kind through inefficiency or slackening of power. To the merchants, let me suggest the motto, "Small Profit, Quick Service"; and to the shipbuilder, the thought that life and war depend upon him. Food and war supplies must be carried across the seas, no matter how many ships are sent to the bottom. The places of those that go down must be supplied—and supplied at once. To the miner, let me say that he stands where the farmer does. The work of a world waits on him, and if he slackens or fails armies and statesmen are helpless. He also is enlisted in the great service of the army. The manufacturer does not need to be told, I hope, that the nation looks to him to speed and perfect every process, and I want only to remind his employees that their service is absolutely indispensable and is counted on by every man who loves this country and its liberties.

NO TIME FOR EXTRAVAGANCE

Let me suggest also that every one who creates and cultivates a garden helps to solve the problem of feeding the nations, and every housewife who practises strict economy puts herself in the ranks of those who serve the nation. This is the time for America to correct her unpardonable fault of wastefulness and extravagance. Let every man and every woman assume a duty—the careful and provident use of expenditure as a public duty, and as the dictate of patriotism which none can now expect ever to be excused or forgiven for ignoring.

In the hope that this statement of the needs of the nation and the world in the hour of supreme crisis may stimulate those to whom it comes, and remind all who need a reminder, of the solemn duties of a time such as the world has never seen before. I beg that all editors and publishers everywhere will give as prominent a publication and wide circulation as possible of this appeal, and I venture to suggest also to all advertisement agencies that they would perhaps render

a very substantial and timely service to the country if they would give it widespread repetition, and to clergymen not to think it an unworthy or inappropriate subject of comment and homily for their pulpits. The supreme test of the nation has come, and we must all speak, act, and serve together.

III. FOREIGN TRADE

The following table shows the value of the disclosed imports and exports of merchandise into and from the United Kingdom for each year since 1909, and monthly figures since January, 1917—

	Total Imports.	Total Exports.	Excess of Imports.
	£	£	£
1909	624,705,000	469,525,000	155,180,000
1910	678,257,000	534,146,000	144,111,000
1911	680,157,000	556,878,000	123,279,000
1912	744,641,000	598,961,000	145,680,000
1913	768,735,000	634,820,000	133,915,000
		Annual average	140,433,000
		Monthly „	11,703,000
1914	696,635,000	526,195,000	170,440,000
1915	851,893,000	483,930,000	367,963,000
1916	949,153,000	604,155,000	344,998,000
1916 Monthly Average	79,096,000	50,346,000	28,750,000
1917			
January	90,565,000	55,292,000	35,273,000
February	70,947,000	46,279,000	24,668,000
March	81,114,000	51,681,000	29,433,000
April	84,585,000	44,289,000	40,296,000
May	87,620,000	49,773,000	37,847,000
June	86,068,000	50,080,000	35,988,000
July	90,182,000	54,422,000	35,760,000

Judging by the above figures, the effect of the war on the customary "adverse trade balance" of the United Kingdom (in peace times met by interest due from abroad, and by payments for shipping and other services) has been to increase it by over £200,000,000 per annum. How far *quantities* have increased is not known. Allowance must be made for higher prices or for an "inflated" currency. The true increase in the balance has, however, obviously been much greater than £200,000,000, for since August, 1914, the trade returns have stated that the accounts

of goods imported do not include certain goods which, at the time of importation, were the property of H.M. Government or the Governments of the Allies. The accounts of goods exported include goods bought in the United Kingdom by, or on behalf of, the Governments of the Allies, but do not include goods taken from Government stores or goods bought by H.M. Government and shipped on Government vessels.

Analysis shows that the major part of the disclosed increase in the adverse trade balance has been due to the great advance in prices since the commencement of the war. The effect of the advance in prices on the trade figures is very clearly shown in the table on the following page, extracted from *The Economist* of 27th January, 1917.

It will be observed from the table that the effect of re-calculating actual values in 1916 at prices of 1913 is to reduce the disclosed adverse balance for 1916 from £344,998,000 to £192,422,000. One factor that has tended during the war to widen the margin between imports and exports is the great increase in freight rates and increased insurance charges; for in the Board of Trade Returns the values of imports include cost, insurance, and freight: whereas the values of exports include cost and only the charges of delivery on board ship, generally termed "Free on board": values.¹

When it is borne in mind that millions of men have been withdrawn from production for fighting purposes, and several more millions are either producing war materials or performing services accessory to war, the trade returns for 1916, re-calculated on the basis of prices ruling during 1913, undoubtedly prove the

¹ Mr. Barnard Ellinger writes—

"Before the war, it may be calculated, our interest on Foreign Investment and our Investment of Capital abroad annually about balanced, and very little interest, if any, of recent years came home to balance our international indebtedness. The balance was adjusted by earnings on shipping, insurance, banking, and other commissions, Indian charges, etc. These items together may be taken almost, if not entirely, to have accounted for the deficit of £136,000,000, without reckoning interest on foreign investment, most of which would thus have been re-invested. Our earnings both on imports and exports for freight and insurance have increased so enormously during the war, that they may almost, if not entirely, account for the additional £200,000,000. On £1,500,000,000 foreign trade, our earning on marine insurance and war risk may alone be £30/40,000,000 premiums (the losses on British property do not affect the question); add to this all our increased earning on freight inwards and outwards and between neutral ports, etc.; and interest on such foreign investments which still remained last year, which interest is now being brought home instead of being re-invested abroad, and the £200,000,000 would thus be accounted for."

FOREIGN TRADE OF UNITED KINGDOM

Articles.	Value in 1916.		Actual Value in 1913.	1916 compared with 1913. Increased or Decreased Value.		
	Actual in 1916.	At Prices of 1913.		Due to Variation in		Actual Change Recorded.
				Quantity.	Price.	
Imported	£ 949,153,000	£ 655,860,000	£ 768,735,000	£ - 112,875,000	£ 293,293,000	+ £ 180,418,000
Re-exported	97,609,000	83,528,000	109,575,000	- 26,047,000	+ 14,081,000	- 11,966,000
Retained for Home Consumption	851,544,000	572,332,000	659,160,000	- 86,828,000	+ 279,212,000	+ 192,384,000
Exports of British Produce	506,546,000	379,910,000	525,245,000	- 145,335,000	+ 126,636,000	- 18,699,000
Balance of Imports	344,998,000	192,422,000	133,915,000	+ 58,507,000	+ 152,576,000	+ 211,083,000
Total Trade	1,553,308,000	1,119,298,000	1,403,555,000	- 284,257,000	+ 434,010,000	+ 149,753,000

adaptability and elasticity of the productive power of the United Kingdom under war conditions. There is still, however, plenty of evidence that imports may be further reduced by diminished consumption and increased home production without impairing the health of the people. The nation has not yet made its maximum possible effort. Up to March, 1917, and since January, 1915, it has been able to keep its disclosed adverse trade balance in the neighbourhood of £30,000,000 a month, notwithstanding the continuous demands of the Army for men and supplies, and advancing prices. For April to July, 1917, the monthly average was about £37,000,000.

The Board of Trade Returns for bullion and specie for the three years 1914-1916 are given below—

	Imports.		
	1914. £	1915. £	1916. £
Gold Bullion and Coin . . .	58,642,211	10,828,366	17,790,302
Silver Bullion and Coin . . .	11,952,790	10,560,161	13,677,650
	Exports.		
	1914. £	1915. £	1916. £
Gold Bullion and Coin . . .	30,599,050	39,218,113	38,448,912
Silver Bullion and Coin . . .	10,889,075	7,360,576	10,741,342

According to these figures, exports of gold from the United Kingdom exceeded imports during the three years 1914-1916 by only £21,000,000.

IV. COMMODITY PRICES AND THE COST OF LIVING

Since the publication of our last report, there has been a further considerable increase in commodity prices. *The Economist* index number of wholesale prices, which was 191·1 at the end of July, 1916, had risen to 254·4 at the end of July, 1917—an increase of 33 per cent. *The Statist* index number of wholesale prices, which was 130·5 for July, 1916, had risen to 177·7 for July, 1917—an increase of 36 per cent. The causes of the further rise in prices during the past year have mainly been an intension of those detailed in our last report.

The monthly course in index numbers since the commencement of the war is shown in the following table.

INDEX NUMBERS OF *THE STATIST* AND *THE ECONOMIST*

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1914.												
<i>Statist</i> . . .	83.5	83.8	82.8	82.3	82.3	81.2	82.4	87.9	89.3	89.8	88.8	91.6
<i>Economist</i> .	119.0	118.9	118.0	117.5	118.0	115.9	116.6	122.6	126.4	124.2	125.5	127.3
1915.												
<i>Statist</i> . . .	96.4	100.9	103.7	105.9	107.2	106.4	106.4	107.0	107.8	110.0	113.1	118.4
<i>Economist</i> .	136.5	142.3	150.2	151.2	151.2	147.7	149.1	149.8	151.6	153.2	159.1	165.1
1916.												
<i>Statist</i> . . .	123.6	127.0	130.4	134.2	135.4	131.0	130.5	134.5	134.4	141.5	150.8	154.3
<i>Economist</i> .	174.5	182.2	182.4	190.5	196.3	191.5	191.1	198.7	201.0	208.7	217.2	223.0
1917.												
<i>Statist</i> . . .	159.3	164.0	169.0	173.0	175.0	181.2	177.7					
<i>Economist</i> .	225.1	230.5	240.9	244.5	246.0	256.6	254.4					

Since the commencement of the war, the rise in wholesale prices, comparing July, 1917, with July, 1914, has been 116 per cent. on the basis of *The Statist* index numbers and 118 per cent. on the basis of *The Economist* index numbers. *The Statist* numbers show that in the period 30th June, 1914–31st July, 1917, food has advanced 127 per cent. in price and materials 113 per cent.

Retail prices of food on 1st August, 1917, according to the *Board of Trade Labour Gazette*, were 102 per cent. higher than on 30th June, 1914. The Board of Trade index numbers are ascertained by weighting the several articles taken in accordance with the proportionate expenditure on them in pre-war family budgets, no allowance being made for the considerable economies resulting from changes in dietary which have been widely effected during the war, particularly in those households where the total income has not increased during the war.

The following table shows at monthly intervals from 31st December, 1914, the percentage rise in retail food prices since 30th June, 1914, according to Board of Trade calculations.

At	Year 1915.	Year 1916.	Year 1917.
Jan. 31 . . .	22	47	89
Feb. 28 . . .	24	48	93
Mar. 31 . . .	24	49	95
Apr. 30 . . .	26	55	98
May 31 . . .	32	59	102
June 30 . . .	33	61	104
July 31 . . .	34	60	102
Aug. 31 . . .	35	65	
Sept. 30 . . .	40	69	
Oct. 31 . . .	41	78	
Nov. 30 . . .	44	84	
Dec. 31 . . .	45	87	

The cost of all items ordinarily entering into working-class family expenditure, including food, rent, clothing, fuel and light, was estimated by the Board of Trade to be 75 per cent. higher on 1st August, 1917, than on 30th June, 1914, taking the same quantities and descriptions of the various items at each date and eliminating advances arising from increased duties.

SECTION B

I. CURRENCY

There have been no great changes in currency during the third year of war, beyond a further absorption of paper issues. As is shown below, an additional £40,867,128 in Treasury currency notes and currency note certificates has been absorbed by the public and the banks—by the public as additional legal tender currency (which has been apparently required to meet the increased prices of goods and services); and by the banks to augment their legal tender reserves. In a new pattern, as suggested in our report of last year, the design of the £1 currency note has been improved, having been issued since 1st February, 1917, on thicker paper than that of the previous note, and showing the Houses of Parliament at the back. There is no statement on the new note that, under the Currency and Bank Notes Act of 6th August, 1914, it is payable in gold on demand at the Bank of England, London, an omission we have commented upon in our previous reports. On this point, Sir R. H. Inglis Palgrave observes—

The currency notes are not marked as payable in specie anywhere. As a matter of fact, they are paid in specie at the Head Office of the Bank of England, in Threadneedle Street (and in no other office of the Bank). This is not generally known. The amount thus paid is believed to be small, and it is almost certain that at this date (7th July, 1917) we are undergoing all the inconvenience and loss of a depreciated currency.

The following table shows the amount of currency notes and currency note certificates outstanding, together with the composition of the Currency Note Redemption Account, at the end of each year of war,

CURRENCY NOTES OUTSTANDING AND REDEMPTION ACCOUNT

At	Notes and Certificates out- standing.	Redemption Account :			
		Gold Coin and Bullion.	Ratio of Gold to Notes.	Government Securities.	Balance at Bank of England.
	£	£		£	£
1915.					
Aug. 4 . .	46,729,640	28,500,000	61·0	9,585,828	7,437,287
1916.					
Aug. 2 . .	127,674,408	28,500,000	22·4	92,704,722	8,583,605
1917.					
Aug. 1 . .	168,541,536	28,500,000	16·9	141,590,655	5,158,641

Currency notes were first issued by the Treasury on Friday, 7th August, 1914. The outstanding issue has since tended to increase continuously, though decreases have occurred in some weeks, in some cases due to variations in joint stock bank reserves. The above table shows that at the end of the first year of war the notes and note certificates outstanding amounted to £46,729,640; at the end of the second year to £127,674,408, an increase of £80,944,768; and at the end of the third year to £168,541,536, an increase of £40,867,128.

The balance sheet of the Currency Note Account, as at Wednesday, 1st August, 1917, is shown below—

BALANCE SHEET, 1st August, 1917

	£		£
<i>Notes outstanding —</i>		<i>Advances—</i>	
One Pound . . .	121,192,625	Scottish and Irish	
Ten Shilling . . .	31,948,911	Banks of Issue . . .	—
		Other Bankers . . .	179,000
		Trustee Savings Banks	255,500
Certificates outstanding	15,400,000	<i>Currency Note Redemption Account—</i>	
Total . . .	168,541,536	Gold Coin and Bullion	28,500,000
Investments Reserve A/c	7,142,260	Government Securities	141,590,655
		Balance at Bank of England	5,158,641
Total	<u>175,683,796</u>	Total	<u>175,683,796</u>

A further increase in the bank note circulation has taken place during the past year, full particulars of which are shown in the following table.

BANK NOTES

AVERAGE CIRCULATION FOR FOUR WEEKS ENDING DATES AS STATED

Bank of England. ¹	Private Banks in England.	Joint Stock Banks in England.	Total.
July 8, 1914— £29,109,149	July 4, 1914— £62,578	July 4, 1914— £19,135	£29,190,862
July 7, 1915— £33,946,480	July 3, 1915 £83,912	July 3, 1915 — £25,638	£34,056,030
July 5, 1916— £35,708,966	July 1, 1916— £94,767	July 1, 1916— £30,647	£35,834,380
July 11, 1917— £39,358,081	July 7, 1917— £115,043	July 7, 1917— £28,734	£39,501,858

	Irish Banks.	Scotch Banks.	Total.
Ending July 18, 1914 . .	£8,038,396	£7,990,118	£16,028,514
„ „ 17, 1915 . .	13,259,802	11,372,279	24,632,081
„ „ 15, 1916 . .	17,365,776	14,520,385	31,886,161
„ „ 14, 1917 . .	20,069,297	17,451,575	37,520,872

It will be observed from the above table that of the total increase of £9,300,000 in the bank note circulation for the past year, notes of the Bank of England account for £3,700,000, notes of the Irish banks for £2,700,000, and notes of the Scotch banks for £2,900,000 (taking four week averages).

Gold, as we pointed out in our last report, has now practically disappeared from circulation. We are informed that small amounts of this metal still trickle into the banks. During the issue of the last war loan (12th Jan.—16th Feb., 1917) it was noted, as in previous issues, that a few of the applicants elected to pay part or the whole of their subscriptions in gold, which they must obviously have hoarded in their homes.

Finally, in the matter of the known increase in the use of cheques during the war, an interesting observation was made by the Chancellor of the Exchequer in his Budget speech in the House of Commons on 2nd May, 1917. Whilst referring to the revenue derived from stamp duties during the past fiscal year, he stated:

¹ It is generally considered that from 70 to 75 per cent. of the active note circulation of the Bank of England is in the tills, safes, and strong rooms of the Joint Stock banks.

"The total amount collected by penny stamps exceeds £2,000,000, and is, indeed, a larger sum than at any time previous to the war. That is, of course, largely due to cheques, and shows, what we might have expected, that the use of cheques as a form of currency has increased during the continuance of the war."

II. THE BANKING POSITION

It is almost redundant to state that the banking position has been of exceptional interest during the war. Axioms have been tested and occasionally found wanting; but, on the whole, the experience of war both in this country and in Germany has proved that banking has its real apex in productive power and services. Criticism was levelled at the German banking system in the early stages of the war on the ground that German banks were too directly involved in commercial and industrial enterprises. Inevitable collapse of the German system was predicted if the war proved to be of long duration. More mature consideration leads to the conclusion that neither in Germany nor in this country can there be a permanent collapse of the banking system, provided that the State is ever ready to pledge its credit; in other words, the national productive power, in support of the generally accepted custodians and manufacturers of credit—the banks—in the event of a general demand for payment in the form of legal tender.

Economic theory in relation to banking has been triumphant during the war. The maxim that every debit has its contra credit somewhere in the books of the banks of the United Kingdom has been amply proved during the successive issues of war loans and the financing of the war.

The outstanding features of the third year of war, in so far as the banks were concerned, were, first, the issue of the great War Loan during 12th January–16th February, 1917; second, the continued expansion of bank credit with its contra effect of increasing bank deposits, and also partly of increasing the so-called cash reserves of the banks. These features in relation to banking are considered at length in the immediate following pages.

(a) BANK OF ENGLAND

We give on pages 210 and 211 a record of the main items of the

Bank of England Weekly Returns issued during the third year of war. This record discloses the following features—

In that period:

(1) The Bank of England Note Circulation increased by only £3,819,000.

(2) The Central gold reserve showed little variation, though the amount was £3,065,000 lower at the end of the year. (Whilst referring to the gold reserve, it is opportune to record that since early in August, 1916, the Bank of England has discontinued the publication of its customary daily bulletin of gold arrivals and withdrawals.)

(3) Public Deposits remained in the neighbourhood of £50,000,000 (excepting during March) until the last week in June; but Other Deposits experienced a further increase of £43,227,000, due to new creations of credit by the Bank of England.

(4) In January, February, and March, there were great fluctuations in the four items: Government Securities, Other Securities, Public Deposits, and Other Deposits, due to special transfer operations connected with (a) the great Ways and Means Advances made to the Government, following the cessation of sales of Treasury Bills from 4th January and up to the receipt of the proceeds of the new War Loan, and their subsequent partial repayment; (b) the ingathering of the proceeds of the War Loan and their rapid disbursement; (c) the borrowing and subsequent repayment of loans from the Bank of England by the joint stock banks, whilst the proceeds of the War Loan were being collected and disbursed by the Treasury.

It is not possible to analyse to any great degree of certainty the weekly fluctuations in the four items, for since the commencement of the war the final figures in the weekly returns of the Bank of England have been no safe guide to the nature and magnitude of financial operations that have taken place in the periods intervening between the issue of successive returns. War finance necessarily causes many cross transfer entries to be made in the books of the Bank of England—the central institution—during the course of each week, of which there is often no evidence in the weekly returns. Moreover, the method of accounting in the books of the Bank of England for loans of bankers' spare balances, at fixed rates of interest for short periods, has not been disclosed.

There is every reason to believe that in this matter the Bank of England acts on behalf of the Treasury.

The system by which the Bank of England now takes loans from the other banks at fixed rates of interest, repayable at three days' notice, unless specially fixed for longer periods, was introduced at the commencement of 1916, but at first it was restricted to loans from the clearing banks. It has necessarily given the Bank of England a great control over the money market, for the rate it offers on spare balances practically establishes a minimum below which the main dealers in credit will not lend. During the first half of the year 1916, such interest rate varied from 4 to $4\frac{1}{2}$ per cent. For the greater part of the second half of the year (since the middle of July) the rate was 5 per cent. During the second week in January, 1917, after the cessation of sales of Treasury Bills, it was announced that the Bank of England was prepared to take spare balances from the Scottish and Colonial banks, as well as from the clearing banks, the rate (for spare balances from the Scottish and Colonial banks) being $4\frac{1}{2}$ to 5 per cent., according to the currency of the loan. On Monday, 26th February, the Bank of England again altered the rate it was allowing on loans of spare balances from other banks, making it $4\frac{1}{2}$ per cent. in the case of the clearing banks, and 4 and $4\frac{1}{2}$ per cent. in the case of other banks, according to the currency of the loan. Although the Bank Rate was reduced from $5\frac{1}{2}$ per cent. to 5 per cent. on Thursday, 5th April, 1917, no change was made by the Bank of England in its special deposit rate of $4\frac{1}{2}$ per cent. for bankers' spare balances. On Tuesday, 19th June, however, the special deposit rate for bankers' spare balances was again reduced, to 4 per cent. in the case of the clearing banks, and to $3\frac{1}{2}$ per cent. in that of other banks, which rates were still in force at the end of the third year of war. It will be observed that on each occasion of change in rates, the rate given by the Bank of England to banks outside the clearing was kept $\frac{1}{2}$ per cent. below the rate given to the clearing banks.

The interest rate allowed by the Bank of England on bankers' spare balances has practically displaced the official minimum discount rate as the governing factor in the money market.

Bank Rate changes during the third year of war numbered two. On Thursday, 18th January, 1917, the official minimum discount

BANK OF ENGLAND

Date.	Notes in Circulation.	Gold Coin and Bullion in Issue Department.	Government Securities in Banking Department.	Other Securities in Banking Department.	Total Securities in Banking Department.
1916.	£	£	£	£	£
Aug. 2	36,657,625	52,910,195	42,188,361	75,657,166	117,845,527
" 9	36,146,815	54,575,870	42,188,110	80,642,144	122,830,254
" 16	35,705,795	55,546,210	42,188,270	83,811,349	125,999,619
" 23	35,536,395	55,254,220	42,187,602	89,047,403	131,235,005
" 30	36,151,935	54,404,995	42,188,314	91,941,125	134,129,439
Sept. 6	36,264,120	53,580,180	42,187,947	95,739,358	137,927,305
" 13	36,121,435	52,969,120	42,187,546	94,460,298	136,647,844
" 20	35,972,870	52,809,190	42,187,627	96,102,911	138,290,538
" 27	36,535,555	51,748,665	42,187,627	95,386,643	137,574,270
Oct. 4	37,064,330	52,788,455	42,188,051	109,167,555	151,355,606
" 11	36,854,070	53,815,300	42,188,051	102,773,484	144,961,535
" 18	36,667,860	54,536,265	42,187,840	101,389,822	143,577,662
" 25	36,686,020	54,178,275	42,187,852	102,442,757	144,630,609
Nov. 1	37,224,295	54,426,970	42,188,153	105,714,121	147,902,274
" 8	37,172,165	54,589,260	42,187,741	100,682,658	142,870,399
" 15	36,894,970	54,529,235	42,188,405	106,233,903	148,422,308
" 22	36,919,590	54,572,190	42,187,582	98,634,422	140,822,004
" 29	37,656,285	54,284,180	42,188,117	104,270,976	146,459,093
Dec. 6	37,858,335	54,233,105	42,187,693	106,749,646	148,937,339
" 13	37,957,340	53,461,650	42,187,599	104,059,713	146,247,312
" 20	39,224,100	52,853,390	42,187,508	104,680,907	146,868,415
" 27	39,675,535	52,840,165	57,187,707	106,461,404	163,649,111
1917.					
Jan. 3	39,895,160	53,534,690	62,187,545	91,789,493	153,977,038
" 10	39,016,540	54,044,645	120,273,560	42,584,503	162,857,863
" 17	38,831,640	54,728,965	133,883,190	37,381,804	171,264,994
" 24	38,784,905	55,231,110	133,879,476	37,836,208	171,715,684
" 31	39,601,075	55,270,480	160,373,392	35,727,351	196,100,743
Feb. 7	39,535,325	55,495,950	212,396,597	38,579,538	250,976,135
" 14	39,450,535	55,603,260	134,959,208	44,034,194	178,993,402
" 21	38,575,685	54,192,015	84,931,646	93,215,121	178,146,767
" 28	38,584,710	52,717,870	82,445,859	117,383,137	199,828,996
Mar. 7	38,236,720	52,331,155	31,965,781	196,029,100	227,994,881
" 14	38,073,490	51,987,455	24,081,221	165,424,569	189,505,790
" 21	37,824,290	52,069,790	24,051,099	151,821,035	175,872,134
" 28	38,289,135	52,031,625	24,003,237	139,610,254	163,613,491
Apr. 4	38,900,585	52,640,275	39,244,854	123,307,951	162,552,805
" 11	38,630,650	52,854,695	37,596,370	123,623,561	161,219,931
" 18	38,111,715	52,979,215	37,574,695	124,043,796	161,618,491
" 25	38,227,090	53,116,980	37,472,228	114,436,540	151,908,768
May 2	38,849,620	52,896,410	45,025,328	114,093,180	159,118,508
" 9	38,724,155	52,776,985	45,049,406	111,479,848	156,529,254
" 16	38,514,495	52,521,155	44,963,406	108,231,263	153,194,669
" 23	38,695,975	52,696,145	45,044,406	116,610,607	161,655,013
" 30	39,015,050	52,698,220	45,080,406	115,055,100	160,135,506
June 6	38,965,745	52,681,475	45,247,406	106,749,030	151,996,436
" 13	38,778,505	52,973,035	45,208,106	113,124,499	158,332,605
" 20	38,839,580	54,183,415	45,230,106	105,887,648	151,117,754
" 27	39,399,545	54,993,285	45,270,106	100,225,942	145,496,048
July 4	40,202,705	52,603,620	45,500,261	111,080,511	156,580,772
" 11	39,930,070	50,764,375	45,465,561	108,600,131	154,065,692
" 18	39,517,425	50,545,670	45,487,661	112,664,895	158,152,556
" 25	39,736,370	50,512,690	48,127,661	111,365,542	159,493,203
Aug. 1	40,476,410	49,845,650	50,439,661	110,654,852	161,094,513

BANK OF ENGLAND

Date.	Public Deposits.	Other Deposits.	Bank Post Bills.	Total Deposits and Bank Post Bills.	Reserve.	Proportion of Reserve to Liabilities.
1916.	£	£	£	£	£	%
Aug. 2	51,009,979	85,517,391	31,924	136,559,294	36,676,809	27
" 9	54,625,309	88,989,712	31,506	143,646,527	38,853,992	27
" 16	54,221,928	93,862,127	26,862	148,110,917	40,157,976	27
" 23	51,428,269	101,751,917	20,855	153,201,041	40,060,519	26
" 30	52,361,446	102,140,601	21,257	154,523,304	38,495,563	25
Sept. 6	52,218,939	105,094,078	22,184	157,335,201	37,527,683	24
" 13	59,146,591	96,383,386	22,423	155,552,400	37,024,518	24
" 20	52,992,848	104,185,085	20,638	157,198,571	37,056,500	24
" 27	53,371,842	101,483,434	17,761	154,873,037	35,466,693	23
Oct. 4	52,235,504	117,402,096	22,331	169,659,931	36,016,190	21
" 11	55,135,356	109,360,502	27,515	164,523,373	37,292,359	23
" 18	55,589,446	108,495,580	19,675	164,104,701	38,237,291	23
" 25	52,543,213	112,171,721	18,167	164,733,101	37,827,446	23
Nov. 1	51,107,437	116,622,055	21,412	167,750,904	37,589,045	22
" 8	51,597,052	111,252,003	20,498	162,869,553	37,773,066	23
" 15	53,738,394	114,924,843	20,431	168,683,668	38,031,451	22
" 22	55,580,473	105,417,900	20,142	161,018,515	37,938,443	24
" 29	56,236,730	109,268,585	20,132	165,525,447	36,836,757	22
Dec. 6	58,716,597	108,946,191	20,027	167,682,815	36,534,395	22
" 13	57,511,685	106,526,295	20,355	164,058,335	35,598,584	22
" 20	53,580,815	109,007,255	23,891	162,611,961	33,573,700	21
" 27	52,116,381	126,726,657	21,952	178,864,990	33,079,380	19
1917.						
Jan. 3	53,147,093	116,388,305	22,525	169,557,923	33,512,304	20
" 10	49,529,490	130,248,009	29,364	179,806,863	34,898,022	19
" 17	51,324,995	137,699,276	25,337	189,049,608	35,733,648	19
" 24	50,721,310	139,231,596	26,539	189,979,445	36,288,135	19
" 31	44,764,140	168,377,346	27,957	213,169,443	35,513,637	17
Feb. 7	42,262,099	226,469,916	27,941	268,759,956	35,839,089	13
" 14	51,923,359	145,157,070	28,240	197,108,669	36,140,502	18
" 21	48,836,080	146,828,413	27,924	195,692,417	35,602,158	18
" 28	47,846,179	167,992,209	27,726	215,866,114	34,161,380	16
Mar. 7	120,889,462	123,164,655	27,317	244,081,434	34,223,215	14
" 14	86,377,187	119,113,886	25,358	205,516,431	34,161,355	17
" 21	67,911,044	124,334,827	26,738	192,272,609	34,588,004	18
" 28	49,945,343	129,647,012	26,183	179,618,538	34,169,994	19
Apr. 4	50,123,837	128,968,333	30,678	179,122,848	34,240,303	19
" 11	49,392,129	128,862,754	36,939	178,291,822	34,750,343	19
" 18	54,768,321	124,538,598	31,523	179,338,442	35,402,978	20
" 25	52,450,017	117,249,044	36,465	169,735,526	35,470,527	21
May 2	47,226,402	128,858,993	42,978	176,128,373	34,675,613	20
" 9	54,172,724	119,375,972	37,907	173,586,603	34,745,456	20
" 16	52,995,952	117,226,143	34,943	170,257,038	34,776,284	20
" 23	47,119,602	131,604,304	33,960	178,757,866	34,830,445	20
" 30	57,438,657	119,481,225	35,153	176,955,035	34,535,176	20
June 6	47,998,697	120,797,972	36,299	168,832,968	34,571,820	20
" 13	49,784,232	125,854,837	25,362	175,664,431	35,028,803	20
" 20	50,143,009	119,456,666	26,193	169,625,868	36,245,194	21
" 27	39,163,167	125,126,993	27,156	164,317,316	36,585,329	22
July 4	41,672,768	130,579,220	24,249	172,276,237	33,489,574	19
" 11	42,087,527	126,103,441	24,224	168,215,192	31,952,043	19
" 18	47,755,170	124,711,196	16,591	172,482,957	32,125,125	19
" 25	46,614,733	126,839,973	16,076	173,470,782	31,842,275	18
Aug. 1	44,811,739	128,744,196	16,167	173,572,102	30,429,593	18

rate was reduced from 6 to $5\frac{1}{2}$ per cent., the decline being attributed to improved money market conditions in New York, largely due to the early return flow of money from the Western States to New York and continued large arrivals of gold from Europe. Completion of arrangements for a further British loan in America for \$250,000,000 (roughly, £50,000,000) also helped the reduction. The rate had been raised to 6 per cent. on the previous 13th July in order to protect the London Money Market against the possible effects of a sudden upward movement that had taken place in money rates in New York, which later experience proved to be only temporary. A further reduction in Bank Rate, from $5\frac{1}{2}$ to 5 per cent., took place on Thursday, 5th April, the day America entered the war on the side of the Allies.

On Thursday, 3rd May, 1917, the following interesting announcement was made concerning the establishment of important relations between the Bank of England and the Federal Reserve Bank of New York, which relations should prove of considerable practical value in the future—

“Negotiations for establishing relations between the Bank of England and the Federal Reserve Bank of New York, which were commenced by the Governors of the respective institutions some months ago, have now been concluded. The arrangement provides that the Bank of England will act as the correspondent and agent in London of the Federal Reserve Bank of New York, and that the Federal Reserve Bank of New York will act in a similar capacity in New York for the Bank of England. It is not the intent of the plan that these institutions engage in commercial foreign transactions, the relationship established being primarily for the purpose of affording greater stability to rates of exchange by maintaining with each other mutual accounts of deposit, and by representing each other in the purchase of bills. The plan will also create machinery by which transactions in gold and gold coin will be facilitated, which should result, in normal times, in eliminating or reducing the extensive and unnecessary shipments of gold between nations to settle international balances, which have heretofore not infrequently prevailed. The relationship will also establish a means by which it is hoped financing between the two countries can be accomplished in times of emergency without undue strain upon the exchanges. Provision is made for participation

by other federal reserve banks of the United States desiring to join in the transactions contemplated."

The position of the Bank of England at yearly intervals since 6th August, 1913, is shown below and on the next page. Comparing the weekly return dated 1st August, 1917, with the one dated 22nd July, 1914 (just before the war), the changes in the various items making up the return have been as follows—

1. The Note Circulation (Notes issued by Issue Department less notes in Banking Department) has increased by £11,159,120. As we point out in the section on "Currency," it is generally considered in financial circles that from 70 to 75 per cent. of the Bank of England Note Circulation, in peace time and in war time, is in the tills, safes, and strong rooms of the joint stock banks.

2. The amount of gold coin and bullion held by the Bank of England has increased by £11,281,240 (exclusive of an increase of about £1,000,000 in the Banking Department).

3. Public Deposits have increased by £31,076,346, and Other Deposits by £86,558,899, making a total increase in deposits of £117,635,245 during three years of war.

4. Government Securities have increased by £39,434,535, and Other Securities by £77,022,090, making a total increase in securities of £116,456,625 during three years of war.

5. The Banking Reserve (Notes, Gold and Silver coin in Banking Department) has increased by £1,132,542; but if expressed as a proportion of the total deposit liabilities, it has fallen from 52 per cent. to 18 per cent. during three years of war.

6. Seven-day and other bills have increased by £1,371.

BANK OF ENGLAND

At	Notes Issued.	Total.	Govern- ment Debt.	Other Securi- ties.	Gold Coin and Bullion.	Total.
	£	£	£	£	£	£
Aug. 6, 1913.	55,970,030	55,970,030	11,015,100	7,434,900	37,520,030	55,970,030
July 22, 1914.	57,014,410	57,014,410	11,015,100	7,434,900	38,564,410	57,014,410
" 29, "	55,121,405	55,121,405	11,015,100	7,434,900	36,671,405	55,121,405
Aug. 5, "	44,491,070	44,491,070	11,015,100	7,434,900	26,041,070	44,491,070
" 4, 1915.	79,657,775	79,657,775	11,015,100	7,434,900	61,207,775	79,657,775
" 2, 1916.	71,360,195	71,360,195	11,015,100	7,434,900	52,910,195	71,360,195
" 1, 1917.	68,295,650	68,295,650	11,015,100	7,434,900	49,845,650	68,295,650
Increase since July 22, 1914	11,281,240	11,281,240	—	—	11,281,240	11,281,240

BANKING DEPARTMENT.

At	Pro- prietors' Capital.	Rest.	Public Deposits.	Other Deposits.	7-Day and Other Bills.	Total.
Aug. 6, 1913.	£14,553,000	£3,512,457	£9,350,113	£39,822,865	£13,734	£67,252,169
July 22, 1914.	14,553,000	3,446,453	13,735,393	42,185,297	14,796	73,934,939
" 29, " .	14,553,000	3,491,756	12,713,217	54,418,908	10,969	85,187,850
Aug. 5, " .	14,553,000	3,547,083	11,499,452	56,749,610	10,312	86,359,457
" 4, 1915.	14,553,000	3,450,561	147,058,621	84,221,335	41,081	249,324,598
" 2, 1916.	14,553,000	3,410,042	51,009,979	85,517,391	31,924	154,522,336
" 1, 1917.	14,553,000	3,399,004	44,811,739	128,744,196	16,167	191,524,106
Increase since July 22, 1914	—	— 47,449	31,076,346	86,558,899	1,371	117,589,167

At	Govern- ment Securities.	Other Securities.	Notes.	Gold and Silver Coin.	Total.
Aug. 6, 1913.	£12,756,539	£26,988,361	£26,013,865	£1,493,404	£67,252,169
July 22, 1914.	11,005,126	33,632,762	27,697,120	1,599,931	73,934,939
" 29, " .	11,005,126	47,307,530	25,415,055	1,460,139	85,187,850
Aug. 5, " .	11,041,152	65,351,656	8,385,650	1,580,999	86,359,457
" 4, 1915.	46,874,146	155,264,727	46,171,745	1,013,980	249,324,598
" 2, 1916.	42,188,361	75,657,166	34,702,570	1,974,239	154,522,336
" 1, 1917.	50,439,661	110,654,852	27,819,240	2,610,353	191,524,106
Increase since July 22, 1914	39,434,535	77,022,090	122,120	1,010,422	117,589,167

The increase in the item "Securities" shows the extent to which the Bank of England, at the behest of the Government, has manufactured additional credit during the course of the war, and gives the reason for a large part of the great increase that has taken place in the so-called cash reserves of the joint stock banks (cash in hand and at Bank of England) during the course of the war; for, in the main, credit manufactured by the Bank of England usually gravitates by transfer to the balances of the joint stock banks at the Bank of England, if not in the first instance loaned direct to one or more of the joint stock banks. This matter is further explained in the next section.

A record of Bank Rate changes since the commencement of the year 1914, and up to the end of the third year of war, is shown in the table appended.

BANK RATE CHANGES

	Date of Change:		Rate.	Duration in Days.
			%	
1914 .	January 8 . .	Thursday . .	4½	14
" .	" 22 . .	" . .	4	7
" .	" 29 . .	" . .	3	182
" .	July 30 . .	" . .	4	1
" .	" 31 . .	Friday . .	8	1
" .	August 1 . .	Saturday . .	10	5
" .	" 6 . .	Thursday . .	6	2
" .	" 8 . .	Saturday . .	5	705
1916 .	July 13 . .	Thursday . .	6	189
1917 .	January 18 . .	" . .	5½	77
" .	April 5 . .	" . .	5	

(b) JOINT STOCK BANKS

In the following review of the conditions affecting joint stock banks, it is to be understood that the general expression "joint stock banks" includes not only banks which are established under the Joint Stock Companies' Acts, but also the few private banks still remaining in the United Kingdom, such as Beckett & Co., Cox & Co., etc.

The discussion of the banking position in 1916-17 may be pre-faced by an analysis of statements compiled by *The Statist* and published in its issue of 2nd June, 1917, comparing the balance sheet position of the joint stock banks at 31st December, 1916, with that a year before, at 31st December, 1915; and also with that at 31st December, 1913, the latest before the war. It is not possible to bring the figures up to 30th June, 1917, for some of the banks only publish balance sheets once a year (dated 31st Dec.). (See pages 218 and 219.)

The main changes that took place in the position of the joint stock banks during the third year of war may be conveniently considered under the three broad headings: (1) Increase in Cash Reserves; (2) Increase in Deposits; (3) The Influence of the War Loan.

(i.) INCREASE IN CASH RESERVES

The combined balance sheet shows that the joint stock banks increased their so-called Cash Reserves (usually described on balance sheets as "Cash in hand and at Bank of England"¹)

¹ Some banks use the expression "Cash in hand and *with* the Bank of England"; other banks, "Cash in hand and *in* the Bank of England."

during the year 1916 by about £113,000,000. The interesting question arises: To what factors was this very abnormal increase due? We think it advisable to deal with this important matter at some length, in fact to investigate the causes of the great increase in the cash reserves of the joint stock banks since the commencement of the war.

In the first place, in considering the aggregate cash reserves of joint stock banks, it is necessary to bear in mind that the so-called reserves they keep with the Bank of England are not specifically earmarked or set aside in legal tender. Such reserves represent simply deposit liabilities of the Bank of England to the joint stock banks, and possess no priority as to repayment over the Bank's other deposit liabilities. The expression "Cash in hand and at Bank of England" found on the balance sheets of the joint stock banks really means "legal tender in our strong rooms, safes, and tills, and balance standing to our credit in the books of the Bank of England." Just in the same way as traders have come to speak of the balance standing to their credit at a joint stock bank as "Cash at (or with or in) Bank," so the joint stock banks have come to term the balance standing to their credit at the Bank of England as "Cash at (or with or in) Bank of England."

A second point to bear in mind is that it is not possible to state the amount of legal tender held by the joint stock banks themselves separately from the amount of their balances at the Bank of England, for the joint stock banks do not make this separation on their balance sheets. A few of the banks (mainly small banks) still even follow the old practice of lumping together for balance sheet purposes the items "Cash in hand," "Balance at Bank of England," "Money at call and short notice." It may be here noted that prior to the war the aggregate of bankers' balances at the Bank of England was estimated by leading financial authorities to average between £20,000,000 and £25,000,000, and at times the amount was thought to exceed the amount of the Bank of England's own reserve in its banking department.

Whilst it is not possible to estimate even approximately the present amount of legal tender in the hands of the joint stock banks separately from the aggregate of their balances at the Bank of England, it may be said with certainty that the major part of the increase in the cash reserves of joint stock banks during the

war has been due to considerable increases in their balances at the Bank of England, for part of which the Government may now be responsible to the joint stock banks. This will be obvious from the following review of the different ways in which the cash reserves of joint stock banks may be increased.

Taking the joint stock banks as one unit, their cash reserves may at any time be increased in any of the following six ways—

1. By an excess deposit over withdrawal of legal tender by their customers. At certain seasons of the year this happens temporarily in peace times, but it is certain that during the year 1916, and, in fact, since the commencement of the war, there has been an excess withdrawal over deposit of legal tender. It is well known that there has been an almost continuous drain of legal tender from the joint stock banks during the war, owing to the general rise in commodity prices and increased wages requiring an additional amount of legal tender to be in circulation.

2. By the joint stock banks increasing their own reserves of legal tender by withdrawals of legal tender from the Bank of England, and having their balances at the Bank of England maintained or increased by any of the credit operations enumerated under the following paragraphs 3, 4, 5. This method is well illustrated during the war by the indirect effects of the issue of Currency Notes on joint stock bank cash reserves. This is an exceedingly interesting matter. As the joint stock banks take currency notes from the Bank of England, their balances thereat are, of course, debited with the amount. If they keep the withdrawn notes in their own strong rooms, their aggregate cash reserves are not for the time being reduced by the withdrawal. But as soon as they proceed to pay out the notes to their own customers, their aggregate cash reserves will tend to decrease, until such time as the Government draws on the credit created by the withdrawal of the currency notes from the Bank of England, and substitutes its own securities in the Currency Note Redemption Account. The Government drafts will first mainly pass to the credit of customers of joint stock banks, but later, in the course of clearance, will be credited to the balances of the joint stock banks at the Bank of England. The following illustration shows the operation in simple detail. Let us suppose the joint stock banks take £10,000,000 in currency notes from the

COMBINED BALANCE SHEET OF THE BANKS OF THE UNITED KINGDOM
(EXCLUSIVE OF THE BANK OF ENGLAND), 1915 AND 1916

(Compiled by "The Statist," and published in its issue dated 2nd June, 1917)

LIABILITIES					
	1916		1915		
		% of Total.		% of Total.	Increase (+) or Decrease (-).
Capital paid up .	£ 70,697,000	4.1	£ 70,623,000	4.8	+ £ 74,000
Reserve Funds .	43,578,000	2.6	44,644,000	3.0	- 1,066,000
Total .	114,275,000	6.7	115,267,000	7.8	- 992,000
Notes in circulation .	34,814,000	2.0	27,773,000	1.9	+ 7,041,000
Acceptances .	74,336,000	4.3	65,831,000	4.4	+ 8,505,000
Deposit and Current Accounts	1,478,840,000	86.6	1,271,706,000	85.5	+ 207,134,000
Profit Balance .	5,907,000	.4	6,201,000	.4	- 294,000
Total Liabilities	1,708,172,000	100.0	1,486,778,000	100.0	+ 221,394,000

ASSETS					
	1916		1915		
		% of Total.		% of Total.	Increase (+) or Decrease (-).
Cash in hand, at Bank of England, etc. }	£ 337,285,000	19.2	£ 224,421,000	15.1	+ £ 112,864,000
Money at Call & at Short Notice	121,680,000	7.0	101,510,000	6.8	+ 20,170,000
Investments .	436,660,000	25.6	441,052,000	29.7	- 4,392,000
Bills discounted .	176,154,000	10.3	127,401,000	8.6	+ 48,753,000
Advances .	533,513,000	31.9	498,285,000	33.5	+ 35,228,000
Liability of Customers for Acceptances }	74,336,000	4.3	65,831,000	4.4	+ 8,505,000
Bank Premises, etc. .	28,544,000	1.7	28,278,000	1.9	+ 266,000
Total Assets .	1,708,172,000	100.0	1,486,778,000	100.0	+ 221,394,000

NOTE.—" Bankers do not in all cases separate their cash from their call loans or their bills discounted from their advances. To give a comprehensive view of the manner in which banking funds are employed, we have assumed that the experience of banks that do separate these items one from the other is that of all the banks, and we have apportioned the amounts on this basis." (*The Statist.*)

COMBINED BALANCE SHEET OF THE BANKS OF THE UNITED KINGDOM
(EXCLUSIVE OF THE BANK OF ENGLAND) 1916 AND 1913

(Compiled by "The Statist," and published in its issue dated 2nd June, 1917)

LIABILITIES					
	1916	% of Total.	1913	% of Total.	Increase (+) or Decrease (-).
Capital paid up .	£ 70,697,000	4.1	£ 71,202,000	5.6	- 505,000
Reserve Funds .	43,578,000	2.6	46,621,000	3.7	- 3,043,000
Total . . .	114,275,000	6.7	117,823,000	9.3	- 3,548,000
Notes in Circulation . .	34,814,000	2.0	15,981,000	1.2	+ 18,833,000
Acceptances . .	74,336,000	4.3	63,458,000	5.0	+ 10,878,000
Deposit and Current Accounts	1,478,840,000	86.6	1,070,681,000	84.0	+ 408,159,000
Profit Balance .	5,907,000	.4	6,094,000	.5	- 187,000
Total Liabilities	1,708,172,000	100.0	1,274,037,000	100.0	+ 434,135,000

ASSETS					
	1916	% of Total.	1913	% of Total.	Increase (+) or Decrease (-).
Cash in hand, at Bank of England, etc. }	£ 337,285,000	19.2	£ 152,308,000	11.9	+ 184,977,000
Money at Call & at Short Notice	121,680,000	7.0	145,632,000	11.4	- 23,952,000
Investments . .	436,660,000	25.6	210,934,000	16.6	+ 225,726,000
Bills discounted	176,154,000	10.3	168,396,000	13.2	+ 7,758,000
Advances . .	533,513,000	31.9	505,780,000	39.7	+ 27,733,000
Liability of Customers for Acceptances }	74,336,000	4.3	63,458,000	5.0	+ 10,878,000
Bank Premises, etc. . . .	28,544,000	1.7	27,529,000	2.2	+ 1,015,000
Total Assets .	1,708,172,000	100.0	1,274,037,000	100.0	+ 434,135,000

(For its compilations, *The Statist* takes the figures of the last Balance Sheets issued by the various banks. The majority of these are dated 31st December, for the year in question; but a few are dated earlier, between 30th June and 31st December; or later, between 1st January and 1st April.)

[It is customary to use the term "Deposits" for the aggregate of the balances standing to the credit of customers, whether on strictly deposit account or on current account.]

[NOTE.—See Notes to previous statement.]

Bank of England (for which their balances are debited), £7,000,000 of which they soon afterwards pay out to their customers, and that the Government uses the £10,000,000 credit created by the withdrawal of the notes from the Bank of England: in other words, draws to that amount on the cash balance of the Currency Note Redemption Account; then the credit and debit operations of the various transactions will be as follows—

Balances of Joint Stock Banks at Bank of England debited . . .	£ 10,000,000	Cash Balance (at Bank of England) of Currency Note Redemption Account credited . . .	£ 10,000,000
Cash in hand of Joint Stock Banks reduced by customers' withdrawals	7,000,000	Cash in hand of Joint Stock Banks increased	10,000,000
Balances of customers of Joint Stock Banks debited	7,000,000		
Cash Balance of Currency Note Redemption Account debited . . .	10,000,000		
Public Accounts debited .	10,000,000	Public Accounts credited	10,000,000
		Government Drafts credited to customers of Joint Stock Banks .	10,000,000
		Government Drafts credited to Joint Stock Bank balances at Bank of England . . .	10,000,000

It is easily seen that the net effect of the above operations is an increase in the so-called cash reserves of the joint stock banks by £3,000,000, and a corresponding increase in the deposit liabilities of the joint stock banks to their customers. The following rule may, therefore, be laid down as to the effect of the currency note issue on the cash reserves of the joint stock banks. "To the extent the joint stock banks take currency notes from the Bank of England (without exchanging gold or other notes for them) and retain them in their own reserves, so will their aggregate cash reserves tend to be increased, provided that the Government draws on the credit created by the withdrawal of the currency notes from the Bank of England." The intermediate transactions at the Bank of England may be mentally eliminated by considering the Government to hand to the joint stock banks £10,000,000 in currency notes (legal tender bearer securities), in return for the joint

stock banks crediting £10,000,000 to their customers to whom the Government is indebted for goods and services, and the joint stock banks paying out £7,000,000 of these notes to the same or other customers.

During the course of the war, the Government has repeatedly drawn on the cash balance of the Currency Note Redemption Account, to the aggregate extent of about £118,000,000, up to 31st December, 1916.

No near estimate can be given with certainty of the extent to which the issue of currency notes has actually increased joint stock bank cash reserves since the commencement of the war. We, however, roughly estimate that of the increase of about £185,000,000 in the aggregate cash reserves between 31st December, 1913, and 31st December, 1916, from £40,000,000 to £50,000,000 was due to the issue of currency notes, for reasons already advanced. Of the increase in cash reserves of about £113,000,000 for the year 1916, probably about £20,000,000 was due to the issue of currency notes.

3. By the Bank of England granting credit to bill brokers and other borrowers. If for any reason a joint stock bank wishes to increase its "Cash on hand and at the Bank of England," the usual procedure is to call in part of its loans to bill brokers or other market borrowers, thereby forcing the latter to borrow from the Bank of England. The operation simply involves cross-transfer entries in the books of the Bank of England. Bankers' balances are credited and loans or discounts debited in the books of the Bank of England.

In the Weekly Returns of the Bank of England, bankers' balances are included under the heading "Other Deposits," and loans and discounts (to borrowers other than the Government) under the heading "Other Securities." Loans by the Bank of England to the Government come under the heading "Government Securities," and balances due to the various departments of the Government under the heading "Public Deposits."

Owing to the great increase in the cash reserves of joint stock banks caused by other influences during the war, it is certain that no part of the aggregate increase between 31st December, 1913, and 31st December, 1916, was due to increased borrowings by the joint stock banks and bill brokers at the Bank of England at the latter date as compared with at the former date. There is, in fact,

every reason to believe that such borrowings at the end of the year 1916 were less than at year ends in peace times, for the item "Other Securities" in the Weekly Returns of the Bank of England showed an increase of only £1,800,000 between 20th December and 27th December, 1916, or £2,400,000 between 13th December and 27th December, 1916, as against an increase of £16,200,000 between 24th December and 31st December, 1913; or £25,100,000 between 17th December and 31st December, 1913.

The large payments the joint stock banks had to make to the Bank of England on account of the War Loan issued 12th January-16th February, 1917, caused some of them to borrow temporarily from the Bank of England, but the major part of such borrowings were quickly repaid after Government disbursement of the proceeds of the War Loan.

4. By the Bank of England granting credit to other customers, who transfer the whole or part of it to the accounts of the joint stock banks at the Bank of England. The case already mentioned under (3) of bill brokers being driven to borrow from the Bank of England to meet loans called in by the joint stock banks is one illustration of the creation and transfer of new credit leading to the augmentation of bankers' balances at the Bank of England. There are many other borrowers from the Bank of England who liquidate indebtedness to the joint stock banks by the transfer of advances made to them by the Bank of England. Such advances usually reflect themselves in an increase in the items "Other Securities" and "Other Deposits" in the Weekly Returns of the Bank of England, though current transfers by bankers to Public Accounts may for the time being prevent "Other Deposits" showing approximately the same increase as "Other Securities." It may be laid down as a general principle that any material increase in "Other Deposits" is generally due to an increase in bankers' balances at the Bank of England.

5. By the joint stock banks paying in to their accounts at the Bank of England drafts drawn on the Bank of England. These drafts may be drawn on credit balances or against advances made by the Bank of England, and may represent amounts due direct to the joint stock banks in the first instance, or to customers of the joint stock banks. In the latter case, the joint stock banks will first have given credit to their customers for the amounts of the drafts.

During the course of the war, the joint stock banks have paid into the Bank of England to their credit an enormous number of drafts representing a stupendous amount of Government war disbursements; but these drafts have not caused a corresponding increase in joint stock bank balances at the Bank of England, because they have in the main been drawn against funds which the joint stock banks have first transferred to the Public Accounts, representing subscriptions by themselves and their customers to war loans, and the collection of taxation. The amount disbursed by the Government in the United Kingdom has, however, been greater than the amount the joint stock banks have had to pay to Public Accounts, and the difference is consequently one of the causes of the great increase in the balances of the joint stock banks at the Bank of England since the commencement of the war. The difference has been met by loans from the Bank of England to the Government, and also, there is every reason to believe, by temporary advances from the joint stock banks to the Government, the Bank of England acting as intermediary.

6. By the joint stock banks making temporary loans to the Government through the medium of the Bank of England, the Government using such loans for war disbursements, and the joint stock banks in their balance sheets including them wholly or partly under the heading "Cash in hand and at Bank of England," instead of wholly under the heading "Money at Call and Short Notice." This possible form of Government borrowing was certainly not in operation before the war, but we think it may have been employed during the year 1916 for the following four reasons—

(a) Unless some such method be suggested, no explanation can be given for the major part of the great increase of about £113,000,000 in the cash reserves of the joint stock banks during 1916, for the "Other Deposits" of the Bank of England (under which heading bankers' balances are included) only increased by £14,700,000 (from £112,000,000 to £126,700,000) during that year. Part of the increase in cash reserves would be due, as we have already stated, to additional reserves of currency notes in hand by the joint stock banks, but we do not think that this cause accounts for more than £20,000,000 or so of the increase of £113,000,000 that took place during the year 1916.

(b) The Government Revenue Returns show that the additional

amount temporarily borrowed on the credit of Ways and Means Advances during 1916 was considerably greater than the increase in the item "Government Securities" in the Weekly Returns of the Bank of England, though other sources of temporary borrowings may account for part of this difference.

(c) Since the commencement of 1916, the Bank of England (generally understood to be acting on behalf of the Treasury) has taken spare balances from the other banks at fixed rates of interest for short and varying periods.

(d) Financial authorities accustomed to reading the meanings of the broad fluctuations in the Weekly Returns of the Bank of England have suggested that in the method of accounting in the books of the Bank of England for spare balances borrowed from other banks, which has so far not been disclosed, may be found an explanation of several otherwise inexplicable movements that took place in the items of the Weekly Returns of the Bank of England during the issue of the 5 per Cent. War Loan (12th Jan.—16th Feb., 1917), and for several weeks after.

The Economist, in its special banking issue of 19th May, 1917, made the following interesting comment relative to the interpretation of recent Bank Returns—

The figures published weekly by the Bank of England are at all times full of snares for the unwary investigator, and are more so than ever in war time, owing to the very complicated business that has to be done by the Bank, and the consequent cross currents that are concealed behind the inarticulate reticence of the items in its Return. A fresh complication has been introduced during the year under review by the inauguration of the system by which the Bank of England borrows from the other banks. In old times, when the Bank borrowed, it deducted the sum so taken from its securities on one side and its deposits on the other. If, as is presumably the case, it does so still, there is an unknown factor which makes the figures more than ever a puzzle, since it is in the power of the other banks at any time to increase them on both sides by taking their money back. Any future historian who relies too closely on the Bank's figures for information is thus likely to flounder up to his neck.

It is usual for Government borrowings from the Bank of England to be reflected in a corresponding increase in the item "Government Securities," but no such movement can be detected on account of Government borrowings of bankers' spare balances. It appears probable that the system of accounting for borrowings of bankers' spare balances has been so arranged as not to increase the deposit

liabilities of the Bank of England and reduce its percentage reserve. If the Government borrowed, say, £5,000,000 weekly from the joint stock banks, through the medium of the Bank of England, repayable at short periods, and continuously disbursed such borrowings, neither "Other Deposits" nor "Public Deposits" in the Weekly Returns of the Bank of England need necessarily disclose the transactions. The series of transactions might be as follows: Bankers' balances debited £5,000,000, Public Deposits credited £5,000,000, and *memorandum* of loan made in books of Bank of England. After disbursement, Bankers' balances credited £5,000,000 and Public Deposits debited £5,000,000. This cycle could be repeated as often as agreed upon by the Government, the Bank of England, and the joint stock banks.

Summing up in the matter of joint stock bank cash reserves, we consider that the great increase in such reserves during the war has been due to the expansion of credit by the Bank of England and the ultimate transfer of the major part of it to the accounts of the joint stock banks at the Bank of England, successive borrowings by the Government of bankers' spare balances and subsequent disbursement of such borrowings, and the building up of additional legal tender reserves in hand by the joint stock banks in the form of currency notes and currency note certificates, and the use by the Government of the credit thereby created. No part of the increase has been due to excess deposit over withdrawal of legal tender by customers of joint stock banks, for, on the contrary, there has been an almost continuous absorption of legal tender by the public since the commencement of the war, owing to rapidly increasing commodity prices and wages.

The increase of £69,300,000 in the cash reserves of the joint stock banks during the year 1914 is accounted for by the increase in the liability "Other Deposits" of the Bank of England, and the addition (in the form of currency notes) of many millions to the legal tender in hand by the joint stock banks, during that year. The very small increase of £2,800,000 in the cash reserves during the year 1915 is accounted for by a decrease of many millions in "Other Deposits" of the Bank of England, and the addition of many millions to the legal tender in hand by the joint stock banks, during that year. And the great increase of £113,000,000 in the cash reserves of the joint stock banks during the year 1916 may be

accounted for by successive Government borrowings of bankers' spare balances, and the addition of many millions to the legal tender in hand by the joint stock banks, during that year.

In dealing with the matter of cash reserves, we have taken the increases as shown in the combined balance sheets of joint stock banks compiled by *The Statist*. In the case of those banks that do not separate "Cash in hand and at Bank of England" from "Money at call and short notice," *The Statist*, in compiling the combined balance sheets of joint stock banks, apportions the composite amount referred to in the proportions shown by the banks that do make the separation.

(ii.) INCREASE IN DEPOSITS

During the year 1916, there was a further considerable increase of £207,134,000 in the deposit liabilities of joint stock banks to their customers, according to the combined balance sheet prepared by *The Statist*. This increase was primarily due to the same cause as held accountable in our last report for the very abnormal increases experienced during 1914 and 1915, namely, to the manufacture of additional credit in various forms by the Government and the banks. In the report referred to, bank subscriptions to war loans were shown to cause an expansion in the aggregate of the credit balances due to their customers (usually termed deposits), because when banks subscribe to war loans, taking the banks collectively, they in net effect (after various transfer and re-transfer entries between Public Accounts and bankers' balances) contract with the Government, in return for a certain rate or rates of interest, to credit the amount of their subscriptions to customers to whom payments are due from the Government for goods and services. This the banks are able to do because they are the generally accepted custodians of credit.

As to the character of the loans that caused the increase of £207,134,000 in credit balances during 1916, the combined balance sheet shows that about half, namely, £113,000,000, was due to increase in the item "Cash in hand and at Bank of England." We have already in the preceding section on Cash Reserves expressed our opinion that this increase is due mainly to temporary loans by the joint stock banks to the Government, through the medium of the Bank of England, and partly to increased reserves

of currency notes in the possession of the joint stock banks and Government drawings on the cash balance of the Currency Note Redemption Account. The increase in cash reserves is certainly not due to excess deposit over withdrawal of legal tender by customers. The remainder of the increase in deposits is more than accounted for by an increase of £20,000,000 in money at call and short notice, an increase of £49,000,000 in bills discounted (probably due to increased holdings of Treasury Bills by the banks), and an increase of £35,000,000 in advances to ordinary customers awaiting large payments from the Government. These various items, together with the increase in cash reserves, come to £217,000,000. The excess difference of £10,000,000 is accounted for by an increase of £7,000,000 in bank notes in circulation (not those of Bank of England), a decrease of £1,000,000 in the Reserve funds of the banks, and a decrease of £4,000,000 in Investments.

From the combined balance sheet contrasting the position of the joint stock banks at the end of the year 1916 with that at the end of the year 1913, it will be observed that the aggregate of balances due to customers has increased £408,000,000 in a period of only three years, or at the rate of £136,000,000 per annum, as against a normal increase of £30,000,000 per annum, taking the average increase for the ten years 1904-1913.

During 1917, up to the publication of this report, there is every reason to believe there has been a further considerable increase in banking credit, and consequently in deposit liabilities to customers. The extent to which banks made advances to customers for the purpose of subscribing to the last war loan (issued during 12th Jan.-16th Feb., 1917) is not known, but estimates by financial authorities range as high as £250,000,000. A large part of such advances has since been repaid; but whatever the outstanding amount at the end of this year, it will tend to reflect itself in a corresponding increase in the deposit liabilities of the banks at that date.

From the composition of the combined balance sheet, and the necessity of balancing both sides of the account, it is obvious that at any time the aggregate of customers' credit balances, apart from any excess deposit over withdrawal of legal tender by customers, or a reduction in the relatively small amount of own notes outstanding, can only increase by various forms of credit advances by the banks. In their effect in increasing deposits, it is immaterial

whether the advances be at call, or at short notice, or for more or less fixed periods, or permanent in the form of purchases of investments, and whether made to the Government or the general public. Prior to the war, about 90 per cent. of deposit liabilities was due to the growth in banking credit: in other words, to bank advances and bank purchases of investments (permanent advances till sale of investments).

To make clearer the relationship between bank credit and customers' deposits to any reader into whose hands this report may fall, we quote the following principles laid down by a member of this Committee during the presentation of our last report at the meeting of the Association in Newcastle in September, 1916—

(A) It is through credit expansion that banking deposits mainly increase in normal times. During the ten years, 1904–1913, banking deposits increased on an average about £30,000,000 a year. Of this increase, about £27,000,000 was due to bank credit expansion, the remaining £3,000,000 or less being due to excess deposit over withdrawal of legal tender, mainly gold, by customers.

(B) So long as the banks continue to grant *additional* credit to the community, so long must their deposit liabilities tend to increase correspondingly, for in banking phraseology every debit has its contra credit entry or entries somewhere in the books of the banks of the United Kingdom, unless the debit represents a permanent withdrawal of legal tender. About 90 per cent. of bank deposit liabilities is the result of the growth in banking credit.

(C) Bankers are fully conscious that when they make loans to their customers they are only making book transfer entries in the accounts of their customers and of themselves, for the banks are the generally accepted custodians of credit. Individually, however, banks have to regulate the total amount of their various classes of loans by the amount of their cash reserves, that is legal tender they have in hand and their balances at the Bank of England.

(D) All the leading banks keep a large credit balance at the Bank of England, partly to settle final differences between themselves due to cross crediting of customers' drawings, and partly to provide them with additional legal tender when they are called upon to meet excessive withdrawal over deposit of legal tender by their customers.

(E) Should a bank grant *additional* credit at a rate greater than the increase in its customers' deposits, it would find its cash reserves gradually pass into the control of other banks. Its customers' deposits and consequently its cash reserves are largely dependent on the relative rate to itself at which other banks are creating *additional* credit, but locality often exercises considerable influence in the final distribution of credits.

(F) To the extent that existing deposits are transferred to accounts with debit balances, that is to say, to people who owe money to their banks, the total amount of deposits is reduced; and to the extent that

new loans of credit are transferred to accounts with debit balances, the total amount of deposits will not increase through the creation of the new credit, because old credit will be liquidated by the transfer of the new credit.

(G) The business of banks under modern conditions of credit is of a twofold character. They transfer existing deposits, that is, customers' credit balances, in whole or in part, to the order of their customers, and they create additional deposits by increasing their loans of credit.

(H) The banks render very great services to the community, for the transfer of existing credit and the creation of new credit is absolutely essential to modern production.

(I) The great economic distinction between the Government in war time and the public in peace time obtaining grants of credit from the banks is that the former uses the grant in order to produce and consume goods and services for the destructive purposes of war; but the latter in order to increase productive power, and consequently to increase the available supply of goods at the disposal of the community in the future.

(J) Seeing that public subscriptions to war loans simply means an exchange or transference in ownership to bank deposits, the transferors on each occasion of transfer receiving Government securities granting a lien on the production and services of posterity, it is obvious that the amount of internal war loans that may be raised by an advanced community under modern banking conditions can be very great, provided the terms of issue and methods of collection are made sufficiently attractive to the public, and time is given for alternate collections and disbursements.

In our last report (p. 225) we gave a table, the figures of which were extracted from *The Economist* of 20th May, 1916, showing the amount of and annual increase in bank deposits for each year since 1895. The following table brings the figures up to the end of 1916—

BANK DEPOSITS (EXCLUDING BANK OF ENGLAND AND SAVINGS BANKS)

(Extracted from "*The Economist*," 19th May, 1917)

(000's omitted)

Year.	JOINT STOCK BANKS OF			Private Banks.	Total.	Increase per annum.
	England and Wales.	Scotland.	Ireland.			
1913. . .	£ 809,352	£ 125,887	£ 70,657	£ 27,090	£ 1,032,986	£ 46,563
1914. . .	895,561	132,504	74,501	32,874	1,135,440	102,454
1915. . .	992,555	140,568	77,722	32,891	1,243,736	108,296
1916. . .	1,154,877	166,620	83,746	39,183	1,444,426	200,690

According to *The Economist*, bank deposits aggregated to £1,444,426,000 at the end of 1916, but according to *The Statist* to £1,478,840,000. The difference of about £34,000,000 is nearly accounted for by *The Statist* including in its combined balance sheet the figures of the Yorkshire Penny Bank and the Co-operative Wholesale Society Bank. The deposits of these two institutions amounted to nearly £28,000,000 at the end of 1916.

(iii.) THE INFLUENCE OF THE WAR LOAN

In another part of the report we deal fully with the great success attending the War Loan issued during 12th January–16th February, 1917, applications for which amounted to nearly £1,000,000,000. As from 70 to 80 per cent. of the amount subscribed was paid up in full at the time of application, the joint stock banks had to make arrangements to pay over to the Treasury, in the course of a few weeks, between £600,000,000 and £650,000,000 (after making allowance for surrender of Treasury Bills by applicants), an amount approaching half the total amount of their customers' deposits. This gigantic financial operation was carried through by the Treasury disbursing the amounts daily paid over by the joint stock banks to account of the War Loan almost immediately on receipt of the same, thus quickly restoring in the aggregate the deposits of customers of joint stock banks and, therefore, the balances of the banks at the Bank of England. The transfer was helped by the joint stock banks calling in part or the whole of their spare balances lent to the Bank of England for short periods, and by temporary borrowing to some extent from the Bank of England. The joint stock banks were able to borrow from the Bank of England at 5 per cent. for a month, or 5½ per cent. for longer periods.

In its issues of 24th February, 3rd March, and 10th March, 1917, *The Economist* made the following comments on the Weekly Returns of the Bank of England, dated 21st February, 28th February and 7th March, 1917—

The Bank Return shows a decrease of £50,000,000 in the Government Securities, presumably due to the repayment of Ways and Means advances by the Treasury, and an increase of £49,000,000 in the other Securities, which may be caused by the other banks taking back money that they had lent to the Bank of England.

The Bank Return showed an increase of £24,000,000 in the Other

Securities, presumably caused by the other banks borrowing, or withdrawing advances, from the Bank of England. . . .

The Bank Return showed an increase of £78,500,000 in the Other Securities, and a decrease of £50,500,000 in the Government Securities, presumably because the Government has paid the Bank off and the Bank has lent to the market or to the other banks. On the liabilities' side, £45,000,000 have been taken off the Other Deposits, and £73,000,000 have been added to the Public Deposits. It is a wonderful example of what book-keeping can do when it has the confidence of a rich community behind it.

When the issue of the War Loan was announced, a wish was expressed in several banking quarters that, in order to avoid heavy displacements of cash, subscriptions to the loan by customers and others should be left with the collecting bank, and be drawn against by the Government as required for disbursements, instead of being paid over to Government accounts at the Bank of England, as in past loans. This course of action, however, did not commend itself to the Treasury, but arrangements were made for leaving subscriptions with the collecting banks for fifteen days from date of collection before transferring to the Bank of England to War Loan Account.

Though customers' subscriptions to war loans out of credit balances do not, after Government disbursements, affect the aggregate of balances due to customers of banks, unless part of the disbursements find their way to accounts with debit balances, in actual practice some of the banks get more than their share of the return credits, for locality, as we have previously stated, exercises a considerable influence in the final distribution of credits, even in peace time.

(c) SAVINGS BANKS

The following statements are in continuation of the various tables relating to Savings Banks given in our last report (p. 226)—

TRUSTEE SAVINGS BANKS

Year ending 20 Nov.	No. of Banks.	Number of Depositors.	Increase.	SUMS DUE TO DEPOSITORS :			
				General Depart-ments.	Investment Depart-ments.	Total.	Increase + Decrease -
1913	202	1,912,820	42,310	£ 54,258,861	£ 14,289,116	£ 68,547,977	+ 1,429,955
1914	196	1,917,944	5,124	53,943,271	15,510,615	69,453,886	+ 905,909
1915	191	1,966,730	48,786	51,412,370	15,377,281	66,789,651	- 2,664,235 ²
1916 ¹	190	2,015,550	48,820	53,783,000	14,633,474	68,416,474	+ 1,626,823

¹ The figures for 1916 are still subject to slight correction.

² The decrease shown was less than the increase in the amount of Government Stock held for depositors.

POST OFFICE SAVINGS BANK

Year ending 31 Dec.	No. of Depositors.	Increase.	Amount due to Depositors.	Increase + Decrease -
1913 . . .	9,180,950	312,942	£ 187,248,167	+ £ 5,143,603
1914 . . .	9,281,370	100,420	190,533,208	+ 3,285,041
1915 ¹ . .	9,971,675	690,305	186,327,584	- 4,205,624 ²

The Postmaster-General, in his report on the Post Office Savings Bank for the year 1915, states—

“It is noteworthy that the diversion of large sums of money into War Loan and Exchequer Bonds has had little effect upon deposits in the Post Office Savings Bank. In June and July, 1915, while the lists for the 4½ per Cent. Loan remained open, withdrawals exceeded the normal by approximately £18,000,000; and in January and February, 1916, when the 5 per Cent. Exchequer Bonds were launched, there was some further diversion, but only of comparatively small amounts.”

As we stated in our last report, the figures in the third table (see next page) may be taken as approximately representing, at four-week intervals, the amounts due to depositors in the Trustee Savings Banks (Ordinary Department) and the Post Office Savings Bank. The table shows that during the period covered by the third year of war (5th Aug., 1916–4th Aug., 1917), the amount at the credit of the Trustee Savings Banks decreased by about £3,516,000 due to withdrawals by depositors for investment in the 5 per Cent. War Loan; and during the same period the amount at the credit of the Post Office Savings Bank slightly increased by about £858,000, notwithstanding withdrawals by depositors for investment in the 5 per Cent. Loan. Comparatively speaking, the Post Office Savings Bank suffered less than the Trustee Savings Banks from withdrawals for investment in the last War Loan.

When giving detailed particulars of the stupendous success attending the new War Loan to the House of Commons on 26th February, 1917, the Chancellor of the Exchequer stated that, during the War Loan campaign, special care had been taken not to encourage withdrawals from the Savings Banks, with the result that these withdrawals, in spite of the immense sum raised by the loan, were £6,000,000 less than in the 1915 loan.

¹ Figures for 1916 are not available at the time of going to press.

² The decrease shown was considerably less than the increase in the amount of Government Stock held for depositors.

LIABILITIES OF THE GOVERNMENT ON SAVINGS BANK ACCOUNT

At	Total amount at the credit of		Total.	Increase + Decrease -
	The Fund for the Banks for Savings (Trustee Savings Banks).	The Post Office Savings Bank Fund.		
	£	£	£	£
1914—				For one year
July 11. . . .	54,482,781	192,044,322	246,527,103	+ 7,255,928
1915—				
July 10. . . .	54,607,264	197,512,474	252,119,738	+ 5,592,635
1916—				
July 8. . . .	52,306,657	194,520,479	246,827,136	- 5,292,602
Aug. 5. . . .	52,232,866	193,953,283	246,186,149	For 4 weeks. - 640,987
Sept. 2. . . .	52,215,231	194,250,286	246,465,517	+ 279,368
" 30. . . .	52,455,154	194,875,660	247,330,814	+ 865,297
Oct. 28. . . .	52,583,477	196,000,034	248,583,511	+ 1,252,697
Nov. 25. . . .	52,597,782	195,912,979	248,510,761	- 72,750
Dec. 23. . . .	52,758,239	196,458,436	249,216,675	+ 705,914
1917—				
Jan. 20. . . .	52,882,054	199,445,345	252,327,399	+ 3,110,724
Feb. 17. . . .	52,896,956	194,093,019	246,989,975	- 5,337,424
Mar. 17. . . .	51,510,762	194,009,006 ¹	245,519,768	- 1,470,207
Apr. 14. . . .	46,603,898	194,212,127 ¹	240,816,025	- 4,703,743
May 12. . . .	46,913,245	192,682,685 ¹	239,595,930	- 1,220,095
June 9. . . .	47,372,251	192,957,636 ¹	240,329,887	+ 733,957
July 7. . . .	48,437,580	193,158,819 ¹	241,596,399	+ 1,266,512
				For one year - 5,230,737
Aug. 4. . . .	48,716,324	194,811,264	243,527,588	For 4 weeks + 1,931,189

During three years of war, the deposits of the Trustee Savings Banks have decreased by about £5,767,000, the deposits of the Post Office Savings Bank have increased by about £2,767,000, making a net decrease in Savings Banks deposits of only about £3,000,000, and representing 1·2 per cent. of the total amount due to depositors on 11th July, 1914, just prior to the war. This splendid record proves beyond all doubt—what has often been contended by those experienced in Savings Bank matters—that depositors attach more importance to security, and the facilities afforded for deposit and withdrawal (including the issue of a

¹ Subject to adjustment for War Loan applications.

suitable Pass Book), than to the rate of interest. Throughout the war, the Savings Bank rate of interest has remained at the old and low rate of $2\frac{1}{2}$ per cent. per annum. On grounds of equity to depositors, the rate might have been temporarily raised to, say, 3 per cent., in view of the much higher rates derived by investment in War Loans, Exchequer Bonds, War Savings Certificates, and other forms of Government borrowing, and the publicly-expressed desire of the Government that no excessive transfers from Savings Bank deposits should be made thereto.

The only matter for regret in connection with the foregoing figures is that they do not show that the working classes, as a whole, have deposited any considerable proportion of their greatly increased earnings during the war, though allowance must be made for the increased cost of living.

III. MOBILISATION OF SECURITIES

In our last report we made reference to some of the early stages of the Government scheme for the mobilisation of certain foreign and Colonial securities held in this country. These securities were required by the Government to meet part of the current indebtedness of the Allies to the United States of America, created by very large purchases of foodstuffs and munitions of war in that country. Some of the securities purchased by the Government were later sold outright in America; others were used as collateral for loans raised in America on account of the United Kingdom. During the third year of war the scheme for the mobilisation of securities underwent considerable modification and enlargement, particularly in its later stages by the introduction of the element of compulsion. Indebtedness had not only to be liquidated in America, but in other neutral countries, though in the latter case to a much smaller extent. The following is a summary of the scheme for the mobilisation of securities since its inauguration—

Scheme A.—The Chancellor of the Exchequer stated in the House of Commons on 13th December, 1915, that the Government were desirous of purchasing outright or borrowing certain American and Canadian dollar securities held by holders in this country, in order to use such securities for the purpose of steadying the American exchange. Preferably, holders of selected securities were

invited to sell such securities to the Treasury at the current market price, the purchase money to be paid in five-year 5 per cent. Exchequer Bonds at par. Alternatively, holders who did not wish to sell outright were invited to pledge selected securities with the Treasury for a period of two years from the date of transfer, the lender to receive all interest and dividends paid in respect of them, and also, by way of consideration for the loan, a commission at the rate of 10s. per cent. per annum on the face value of the securities. The Government reserved the right to sell borrowed securities under certain conditions. This reservation did not meet with the approval of holders. The lender, however, had also the right to sell the whole, or a portion, of the securities deposited under the scheme, receiving the amount realised in sterling or the equivalent in sterling of the dollar proceeds. The Treasury later undertook, when deciding to dispose of securities to notify the lender, and to grant him fourteen days in which to buy the securities back by paying the market price in dollars. Holders of required securities were later coerced into selling or lending them to the Treasury by a penal additional income tax of 2s. in the £ on income derived from such securities.

Scheme B.—At the commencement of the third year of war, a second plan, designated Scheme B, was instituted in connection with the mobilisation of securities. This scheme aimed not at the purchase of securities by the Government, but the borrowing of them from the public for five years, with the right to repay earlier. The Treasury announced on 12th August, 1916, that as from 14th August they would be prepared to accept various specified securities upon deposit on certain terms and conditions. The securities specified were certain Argentine Government bonds and railway stocks; Brazilian Funding bonds (1898); various Canadian Government and railway securities; and certain Egyptian, Scandinavian, Japanese, Dutch, and Swiss Government and municipal bonds. Further lists of required securities were published later. The main conditions attaching to Scheme B were as follows: The securities were to be transferred to the Treasury for a period to expire at the end of five years from 31st March, 1917, subject to the right of the Treasury to return them to the holders at any time on or after 31st March, 1919, on giving three months' notice. While the securities were on deposit with the Treasury, the lender

was to receive all interest and dividends paid in respect of them, and also, by way of consideration for the loan, a payment at the rate of 10s. per cent. per annum, calculated on the face value of the securities. The Treasury reserved the right at any time during the currency of the loan to dispose of the securities should they find it necessary to do so; but in the event of their being so disposed of, the lender was to continue to receive from the Treasury the same payments as he would have received if the securities had been retained; and at the end of the period of the loan, the Treasury would either return to the lender securities of the same description and to the same nominal amount as those originally deposited, or, at its option, pay to him the deposit value of the securities, with an addition of 5 per cent. on that value, plus accrued interest from the last preceding interest date. On Tuesday, 15th August, it was announced that should the Treasury be under the necessity of exercising its right to sell any of the deposited securities (a very remote possibility)—and the average price realised was more than the deposit value, plus 5 per cent.—the depositor would, if the securities were not replaced, at the end of the loan period receive the full amount of the average price actually realised. The deposit value of all securities specified in the list of 12th August was stated to be the net mean quotation (less accrued interest when it was included in the price) on the London Stock Exchange on Friday, 11th August; and in the event of other securities being later specified, the net mean quotation on the day preceding the notice of their inclusion in the scheme. The official notice of 12th August also announced that holders of American Dollar Securities who had already deposited them with the Treasury under Scheme A (deposit on loan for two years) might transfer their deposit to Scheme B by giving notice, not later than 14th September, 1916, of their desire to do so. Arrangements were made with the Stock Exchange committee for dealings on the Stock Exchange in the deposit certificates issued in return for securities deposited under Scheme B.

The reservation by the Treasury of the right to sell deposited securities occasioned some misconception at the introduction of Scheme B. The intention of the Government was to use the deposited securities as collateral for loans raised abroad. A definite statement was made by the Chancellor of the Exchequer

in the House of Commons on 23rd August to the effect that deposited securities would not be sold except in the extremely remote contingency of default on the part of the British Government on its own loan.

At first, Scheme B was purely voluntary; but eventually the penal additional income tax of 2s. in the £, alluded to in Scheme A, was extended to cover securities which the Treasury was prepared to borrow under Scheme B.

A second list of securities needed by the Treasury under Scheme B was issued on 24th August, and further lists followed at later dates.

On Saturday, 16th December, it was announced that Scheme A was withdrawn, and depositors were invited to transfer their deposits thereunder to Scheme B. The power of sale possessed by depositors under Scheme A was extended to Scheme B, in respect of all securities subject to the penal income tax, to any securities which the Treasury might wish to purchase, and to those where principal and interest were repayable in United States dollars.

Scheme for Conscription.—A special Supplement to the *London Gazette*, published on Thursday, 25th January, 1917, applied the Defence of the Realm Regulations to certain classes of securities where the Treasury were of opinion that, for the purpose of strengthening the financial position of the country, it was expedient to do so. The Treasury were thereby given the right to requisition or conscript securities, and to require from all holders of certain classes of securities full returns of their holdings, both in the United Kingdom and abroad. Compensation for securities requisitioned was granted on the same principle which had been applied in fixing the price for securities voluntarily sold to the Treasury, that is to say, where entire ownership was required by the Treasury, the capital value of the securities, based on current market prices, was to be paid. Where temporary use of securities only was desired, the remuneration was to be as before, 10s. per cent. per annum on the face value. If full ownership was subsequently required of securities taken in the first instance for temporary use, the compensation payable when full ownership was taken was to be based on the capital value at the date of original requisition, or at the date of taking over full ownership, whichever might be

higher, but no additional allowance was to be granted such as that provided for under the purchase clause of the voluntary deposit scheme. Securities were still to be received on deposit under Scheme B, but only on the understanding that if they were subsequently included in a Treasury order they should then be dealt with under the order without regard to the fact that they had been already deposited. Securities coming within the scope of the regulations might still be sold, always provided that at the time of sale they had not been included in any Treasury order, and the observance of certain conditions of sale.

Up to 4th August, the Treasury had issued four long lists of securities requisitioned under the Defence of the Realm Regulations.

The entry of the United States of America into the war on the side of the Allies at the commencement of April, 1917, and the subsequent granting of loans (from 25th April) by the United States Government to the Allied Governments, has since rendered unnecessary the deposit of securities as collateral for new loans raised in America by the British Government.

At the middle of May, the Treasury announced that, until further notice, no more securities would be accepted for deposit under Scheme B, except securities which were subject to the special income tax of 2s. in the £, but which had not yet appeared in any requisition order under the Defence of the Realm Regulations. Notwithstanding the closure of the deposit scheme, the Treasury were still desirous of purchasing outright American and Canadian dollar securities suitable for sale in the United States of America.

SECTION C

I. GOVERNMENT REVENUE AND EXPENDITURE

The following table shows the actual and estimated revenue for the fiscal year ending 31st March, 1917:

ACTUAL AND ESTIMATED REVENUE,
Year ending 31st March, 1917

	Actual Receipts.	Budget Estimate.	Inc. (+) or Dec. (-) of Actual Receipts on Budget Estimate.
	£	£	£
Customs	70,561,000	71,000,000	- 439,000
Excise	56,380,000	65,000,000	- 8,620,000
Estate, etc., Duties	31,232,000	30,000,000	+ 1,232,000
Stamps	7,878,000	7,000,000	+ 878,000
Land Tax	640,000	2,650,000	- 70,000
House Duty.	1,940,000		
Property and Income Tax (including Super-Tax)	205,033,000	195,000,000	+ 10,033,000
Excess Profits Duty (includ- ing Munitions Levy)	139,920,000	86,000,000	+ 53,920,000
Land Value Duties	521,000	475,000	+ 46,000
Postal Service	24,350,000	36,100,000	- 2,000,000
Telegraph Service.	3,350,000		
Telephone Service.	6,400,000		
Crown Lands	650,000	550,000	+ 100,000
Receipts from sundry loans	8,055,817	5,000,000	+ 3,055,817
Miscellaneous	16,516,765	3,500,000	+ 13,016,765
Total	573,427,582	502,275,000	+ 71,152,582

It will be observed that the most notable deviation from the Budget estimate was the yield from the Excess Profits Duty, which was 63 per cent. higher than estimated. This duty for the four quarters yielded—

Quarter ending	Yield.
	£
June 30, 1916	6,219,000
Sept. 30, 1916	25,166,000
Dec. 31, 1916	48,443,000
Mar. 31, 1917	60,092,000
Total for year	139,920,000 ¹

The total Government expenditure chargeable against revenue for the year ending 31st March, 1917, was £2,198,113,000, being £372,733,000 more than the original Budget estimate.

The deficiency between revenue and expenditure was

¹ Includes £4,620,000 Munitions Levy to 31st March.

£1,624,685,000, and was met out of the following forms of borrowing—

4 per Cent. War Loan, 1929-42, and 5 per Cent. War Loan, 1929-47	£	780,376,710
Exchequer Bonds		340,564,595
Other Debt (created under War Loan Acts, 1914-16) ¹		313,289,896
Temporary Advances		197,630,000
War Savings Certificates		72,750,000
War Expenditure Certificates		23,561,000
4½ per Cent. War Loan, 1925-45		424
The Military Works Acts, 1897-1903		816
The Housing Act, 1914		700
Bullion Advances, excess repaid.		40,000
Total net borrowings		1,728,214,141
<i>Subtract—</i>		
Net redemption of Treasury Bills	£102,271,000	
Sinking Funds (under Acts of 1908-14)	397,160	
		102,668,160
		1,625,545,981
Increase in Exchequer Balances		860,853
		£1,624,685,128

In the following table is shown the increase in revenue since the commencement of the war—

<i>Year ending—</i>	<i>Revenue.</i>
Mar. 31, 1914	£198,243,000
" " 1915	226,694,000 ²
" " 1916	336,767,000
" " 1917	573,427,000
" " 1918	638,600,000 ³

If allowance be made for a normal annual increase in expenditure of £5,000,000, as took place during the last ten years before the war, the increase in taxation directly due to the war is about £420,000,000, comparing the estimated amount of revenue for the current financial year ending 31st March, 1918, with the actual revenue for the year ended 31st March, 1914.

The table on the following page shows in detail the various sources of Government Revenue for each fiscal year since the commencement of the war, the figures for the year ending 31st March, 1914, being given for the purposes of comparison.

¹ Includes loans raised in America and Japan.

² The revised Budget estimate of the Chancellor of the Exchequer before the war was £207,146,000. (Actual Revenue, 2nd August-31st March, £171,759,000.)

³ Estimate given by Chancellor of the Exchequer in Budget Speech on 2nd May, 1917. (Actual Revenue, 1st April-4th August, £172,771,000.)

SOURCES OF REVENUE
for Fiscal Year ending 31st March (hundreds omitted)

	1918. ¹	1917.	1916.	1915.	1914.
	£	£	£	£	£
Customs	70,750	70,561	59,606	38,662	35,450
Excise	34,950	56,380	61,210	42,313	39,590
Estate, etc., Duties	29,000	31,232	31,035	28,382	27,359
Stamps	8,000	7,878	6,764	7,577	9,966
Land Tax	650	640	660	630	700
House Duty	1,950	1,940	1,990	1,930	2,000
Property and Income Tax (including Super-tax)	224,000	205,033	128,320	69,399	47,249
Excess Profits Duty (including Munitions Levy)	200,000	139,920	140	—	—
Land Value Duties	400	521	363	412	715
Receipts from Taxes	569,700	514,105	290,088	189,305	163,029
% of Total Revenue	(89.2)	(89.6)	(86.1)	(83.5)	(82.2)
Postal Service	24,200	24,350	24,100	20,400	21,190
Telegraph Service	3,250	3,350	3,350	3,000	3,080
Telephone Service	6,250	6,400	6,450	6,250	6,530
Crown Lands	600	650	550	545	530
Receipts from Sundry Loans	7,500	8,056	2,432	1,277	1,580
Miscellaneous	27,100	16,517	9,797	5,917	2,304
Receipts from non-tax Revenue	68,900	59,323	46,679	37,389	35,214
% of Total Revenue	(10.8)	(10.4)	(13.9)	(16.5)	(17.8)
Total Revenue	638,600	573,428	336,767	226,694	198,243

In the table on page 242 is shown the total Government expenditure under various headings, chargeable against Revenue for each fiscal year since the commencement of the war, the figures for the year ending 31st March, 1914, being given for the purposes of comparison.

The sum of £160,428,000 was repaid to the Bank of England during the year ending 31st March, 1916, for Advances previously made for war purposes by that Institution.

In connection with the figures given in the above table, it may be mentioned that the amounts given under the heading "Supply Services (Ordinary)" include expenditure upon the ordinary Civil Services; the Post Office Services; and the Customs, Excise, and Inland Revenue Departments. The amounts given under the heading "Supply Services (Votes of Credit)" include all expenses in connection with the Army, Navy, and Munitions during war

¹ Budget estimate.

EXPENDITURE CHARGEABLE AGAINST REVENUE
for Fiscal Year ending 31st March (hundreds omitted)

	1918. ¹	1917.	1916.	1915.	1914.
<i>Consolidated Fund Services—</i>	£	£	£	£	£
Permanent Charge of Debt	17,000	19,783	20,338	20,497	24,500
Interest, etc., on War Debt	194,500	107,467	39,911	2,172	—
Road Improvement Fund	—	—	694	1,528	1,395
Payments to Local Taxation Accounts, etc.	9,700	9,896	9,757	9,529	9,734
Other Consolidated Fund Services	1,695	1,974	2,788	1,694	1,694
Total Consolidated Fund Services	222,895	139,120	73,488	35,420	37,323
<i>Supply Services (Ordinary)</i>	92,486	85,328	86,018	87,718 ²	82,991 ²
<i>Supply Services (Votes of Credit)</i>	1,975,000	1,973,665	1,399,652	437,336 ³	77,179 ³
Grand Total	2,290,381	2,198,113	1,559,158	560,474	197,493

time (together with the sums expended thereon in peace time); loans and advances to Allies and Dominions; payments to the railways under the terms of control; purchases of foodstuffs by the Government; and sundry other charges arising out of the war, but exclusive of interest payments on the War Debt, which is chargeable under "Consolidated Fund Services." The item "Payments to the Railways" only appears in Expenditure ("Votes of Credit") to the extent railway receipts do not cover pre-war amount as arranged by the Government.

II. VOTES OF CREDIT

On Wednesday, 11th October, 1916, a Vote of Credit for £300,000,000, being the fourth for the fiscal year ending 31st March, 1917, was introduced by the Prime Minister (Mr. Asquith).

On Thursday, 14th December, 1916, the new Chancellor of the Exchequer (Mr. Bonar Law) introduced a fresh Vote of Credit for £400,000,000, and in the course of his speech stated that the expenditure for the fiscal year was likely to exceed the original estimate by about £350,000,000.

¹ Budget estimate.

² Excludes outlays upon the Army and Navy now given in expenditures from Votes of Credit.

³ Includes normal expenditure upon Army and Navy: 1914-15, £80,336,000; 1913-14, £77,179,000.

On Monday, 12th February, 1917, the Chancellor of the Exchequer introduced a Vote of Credit for £550,000,000. Of this vote, £200,000,000 was to complete expenditure for the fiscal year ending 31st March, the remaining £350,000,000 being to meet estimated expenditure for the period 1st April to 31st May.

On Thursday, 15th March, 1917, to meet expenditure unforeseen at the time of the introduction of the last vote, Parliament was asked to sanction a supplementary Vote of Credit for £60,000,000 for the year ending 31st March.

On Wednesday, 9th May, the Chancellor of the Exchequer introduced a Vote of Credit for £500,000,000, notwithstanding that the vote introduced on Monday, 12th February, had been estimated to meet expenditure up to 31st May. The Chancellor's explanation of the major part of his previous under-estimate was greater loans to Allies than anticipated, owing to estimated financial assistance from America to our Allies not being received during the period under review; temporary payments on behalf of the Dominions, which would be repaid during the current year; and increased balances in hands of financial sub-agents who make disbursements.

On Tuesday, 24th July, the Chancellor of the Exchequer introduced a Vote of Credit for the record amount of £650,000,000, and at the same time reviewed the excess expenditure to date for the current fiscal year over the rate allowed for in the Budget estimate. He explained that the excess was due to under-estimates of further advances to our Allies, and of Army and munitions expenditure, and to certain items recoverable in the near future. The amount the United Kingdom advanced to her Allies during the period 1st April–21st July, 1917, the Chancellor stated to be £197,000,000, and to her Dominions £4,000,000, making the total of such advances during the war to be: To Allies, £1,025,000,000; to Dominions, £146,000,000—together £1,171,000,000. In a reference to financial assistance from the United States, he pointed out that "it was an open secret that we had spent so freely of our resources, that those available for payment in America had become nearly exhausted when our great Ally entered into the struggle."

Since the commencement of the war, Parliament has sanctioned Votes of Credit aggregating to £5,292,000,000 up to 4th

August, 1917, the various Votes being shown in the following table—

VOTES OF CREDIT SINCE THE COMMENCEMENT OF THE WAR

Date of Treasury Notice.	Amount.	Total for each fiscal year.
	£	£
Aug. 5, 1914	100,000,000	
Nov. 12, 1914	225,000,000	
Feb. 25, 1915	37,000,000	
		362,000,000
„ 25, 1915	250,000,000	
July 10, 1915	250,000,000	
„ 19, 1915	150,000,000	
Sept. 14, 1915	250,000,000	
Nov. 9, 1915	400,000,000	
Feb. 17, 1916	120,000,000	
		1,420,000,000
Feb. 17, 1916	300,000,000	
May 18, 1916	300,000,000	
July 19, 1916	450,000,000	
Oct. 10, 1916	300,000,000	
Nov. 30, 1916	400,000,000	
Feb. 9, 1917	200,000,000	
Mar. 13, 1917 (supplementary)	60,000,000	
		2,010,000,000
Feb. 9, 1917	350,000,000	
May 7, 1917	500,000,000	
July 20, 1917	650,000,000	

III. TREASURY BILLS

At the commencement of the third year of war, the Treasury Bills outstanding amounted to £856,597,000 (5th August, 1916), and had all been issued under the new fixed rate system commenced on 13th April, 1915. By this system, the Treasury sold daily at the Bank of England bills of three, six, nine, and twelve months' maturities at current advertised rates of discount, in denominations of £1,000, £5,000, and £10,000, and for unlimited amounts. The issue of nine month maturities was discontinued from 14th July, 1916. In our last report (p. 290), we reviewed the new system and tabulated the various changes in rates that had been made since it came into operation.

During the third year of war, the following further changes have taken place in the issue of Treasury Bills. On Wednesday, 27th September, 1916, the rates of discount for six and twelve-month maturities were reduced from $5\frac{3}{4}$ per cent. and 6 per cent.

respectively (the rates in operation since 14th July, 1916) to the uniform rate of $5\frac{1}{2}$ per cent., the ruling rate for three-month maturities. The object of the reduction was to divert as much new money as possible from Treasury Bills to the new 6 per cent. Exchequer Bonds to be issued from 2nd October, 1916, and repayable on 16th February, 1920, on account of the longer-dated character of the Exchequer Bonds. For some time previous to the reduction in rates, the large and growing amount of outstanding Treasury Bills had met with disapproval from certain financial quarters. But notwithstanding the extra $\frac{1}{2}$ per cent. interest afforded by investment in Exchequer Bonds, the amount of outstanding Treasury Bills still continued to increase after the reduction in rates. The amount of such bills outstanding on 30th September, 1916, was £1,041,488,000. By 16th December it had grown to £1,148,545,000 (an increase of £107,057,000), the maximum amount recorded as outstanding at the end of any week during the first three years of war. On 9th December the amount was £1,148,471,000; on 23rd December, £1,148,116,000; and on 30th December, £1,115,815,000.

The popularity of Treasury Bills is undoubtedly due to their short-term character. Prior to the war, their purchase was almost entirely confined to banks and financial houses; but the new system of sales at advertised fixed rates of discount soon brought a growing demand for them from the ordinary investor. The Treasury Bill provides a convenient form of investment for institutions and sundry persons who have payments to make in the near future. Not only so, but banks, financial houses, and many ordinary investors like to have the feeling that an inflow of money will be available at definite dates in the near future, if then required for any purposes.

On Thursday, 4th January, 1917, the Government announced that no further sales of Treasury Bills would be made at present. This entire cessation was obviously due to the imminence of the new War Loan, the prospectus of which appeared on 12th January. As old bills matured and while new bills were not available, the outstanding amount rapidly declined, reaching a minimum of £454,478,000 (on 14th April) for the third year of war. The reduction of £694,067,000 in the outstanding amount between 16th December, 1916, and 14th April, 1917, it should be observed,

includes Treasury Bills to the amount of £130,711,950 tendered as subscriptions to the new War Loan, in accordance with the terms of the prospectus.

The proceeds of the new War Loan having been mainly applied to part payment of Ways and Means temporary advances (which had greatly increased after the cessation of sales of Treasury Bills) and to meeting maturing Treasury Bills, it soon became obvious that the Government would be driven to an early resumption of sales of Treasury Bills, in the absence of sufficient receipts from issues of other forms of popular loans, coupled possibly with some form of compulsory subscription. On Friday, 23rd March, 1917, it was announced that sales of Treasury Bills would shortly be resumed on the old pre-war system of tender, in denominations of £1,000, £5,000, and £10,000 as before, and drawn for three, six, or twelve months. The first batch of such bills offered amounted to £50,000,000, to be tendered for on Friday, 30th March, and paid for on Tuesday, 3rd April. The result of the offer was that applicants for three months' bills at £98 16s. 3 $\frac{3}{4}$ d. and above, and for six months' bills at £97 11s. 2d. and above, had their tenders accepted in full. Tenders for twelve months' bills at £95 received about 96 per cent. of the amounts applied for. Further issues of Treasury Bills on the tender system (until its withdrawal in June) are shown in the following table—

TREASURY BILLS ISSUED BY TENDER DURING THIRD YEAR OF WAR
MINIMUM PRICES ACCEPTED FOR PART OR WHOLE OF THE BILLS
(Average Rate not disclosed by Treasury)

Date of Bills.	Amount offered.	Three Months.			Six Months.			Twelve Months.		
1917.	£	£	s.	d.	£	s.	d.	£	s.	d.
April 3. . .	50,000,000	98	16	3 $\frac{3}{4}$	97	11	2	95	0	0
„ 17. . .	50,000,000	98	16	4	97	11	2 $\frac{1}{2}$	95	0	0 $\frac{1}{2}$
„ 24. . .	50,000,000	98	15	10	97	10	6 $\frac{1}{4}$	95	0	0
May 1. . .	20,000,000	98	15	9 $\frac{1}{4}$	97	10	11 $\frac{1}{2}$	95	0	0
„ 8. . .	20,000,000	98	15	10 $\frac{1}{2}$	97	11	6	95	1	6
„ 15. . .	25,000,000	98	15	8 $\frac{1}{2}$	97	11	5 $\frac{1}{2}$	95	2	6
„ 22. . .	20,000,000	98	16	0 $\frac{1}{2}$	97	12	1	95	2	6
„ 29. . .	30,000,000	98	15	11 $\frac{1}{2}$	97	12	0	95	2	6
June 5. . .	40,000,000	98	15	9 $\frac{1}{2}$	97	11	10	95	2	6
„ 12. . .	25,000,000	98	16	0 $\frac{1}{4}$	97	12	4 $\frac{1}{2}$	95	2	6 $\frac{1}{4}$
„ 19. . .	25,000,000	98	15	9 $\frac{1}{2}$	97	11	10	95	2	6 $\frac{1}{4}$

Total of issues . £355,000,000

It is not possible to deduce the average rates of discount at which the various batches of bills issued on the tender system have been placed with purchasers, on account of the meagre amount of information the Treasury has published concerning the allotments. All that it is possible to state is that the bills issued since the resumption of sales on 3rd April have been placed at rates at least less by $\frac{1}{2}$ to $\frac{3}{4}$ per cent. than the $5\frac{1}{2}$ per cent. rate ruling at the time of the cessation of fixed rate sales on 4th January.

On Monday, 23rd April, 1917, it was announced that, in addition to definite amounts of Treasury Bills being offered for sale from time to time on the system of tender, applications would also be received from 28th April for limited amounts of bills at advertised fixed rates of discount, such rates, in the event of tenders for an issue of bills having been received during the preceding seven days, to be less than the average rates of allotment in respect of such issues. Obviously with the desire not to divert the ordinary investor from the new issue of 5 per cent. Exchequer Bonds (issued since 13th April, 1917) to Treasury Bills, the Treasury also announced that applications for Treasury Bills at fixed rates of discount would only be received from banks and discount houses, the minimum application to be for £25,000. The advertised fixed rates for bills purchasable under this scheme, until its withdrawal in June, are shown in the table appended—

FIXED RATES FOR "INTERMEDIATE" TREASURY BILLS

Date Rate fixed.	Three Months.		Six Months.		Twelve Months.	
	Price.	Rate.	Price.	Rate.	Price.	Rate.
1917.	£ s. d.	%	£ s. d.	%	£ s. d.	%
April 28 . . .	98 16 11 $\frac{1}{4}$	4 $\frac{3}{8}$	97 13 7 $\frac{1}{2}$	4 $\frac{3}{8}$	95 2 6	4 $\frac{7}{8}$
May 5 . . .	98 16 8 $\frac{1}{4}$	4 $\frac{3}{8}$	97 13 7 $\frac{1}{2}$	4 $\frac{3}{8}$	95 3 9	4 $\frac{1}{2}$

After eleven issues under the tender system, aggregating to £355,000,000 since the end of March, 1917, the Treasury announced on Monday, 18th June, the discontinuance of the tender system and the resumption, from 19th June until further notice, of daily sales of Treasury Bills at fixed rates of discount, subject to variation from time to time without previous notice. The bills to be issued in amounts of £1,000, £5,000, and £10,000, and to be drawn for three, six, and twelve months. The suspension of the tender

system restored the Treasury Bill procedure practically to what it was when the daily sale system was discontinued on 4th January, 1917. Payment for bills issued on the present daily system may be made to the Bank of England not later than the day following the sale. On the former daily system, payment had to be made on the day of issue. So far since 19th June, no twelve month bills have been offered for sale, presumably because the Treasury wishes to encourage purchases of 5 per Cent. Exchequer Bonds. The rate for three and six month bills offered for sale was fixed at $4\frac{1}{2}$ per cent on 19th June, and raised to $4\frac{3}{4}$ per cent. on 3rd July.

The following table shows the amount of Treasury Bills outstanding at the end of each year of war—

At	Amount Outstanding.	Annual Increase during War.
	£	£
Aug. 1, 1914 . . .	15,500,000	
„ 7, 1915 . . .	236,322,000	220,822,000
„ 5, 1916 . . .	856,557,000	620,235,000
„ 4, 1917 . . .	757,977,000 ¹	98,580,000 (Decrease)

As already stated, Treasury Bills outstanding reached the maximum amount of £1,148,545,000 on 16th December, 1916.

IV. WAYS AND MEANS ADVANCES

The amount of temporary advances outstanding showed considerable increase during the third year of war, the amount outstanding on 4th August, 1917, being £246,131,500, as against £53,396,500 on 5th August, 1916, an increase of £192,735,000 for one year.

Together with outstanding Treasury Bills (£757,977,000), the amount of floating debt at the end of the third year of war was £1,004,108,500.

V. WAR EXPENDITURE CERTIFICATES

The issue of these certificates was discontinued on 1st January, 1917, along with Exchequer Bonds, in view of the imminence of

¹ Includes bills for £418,000, the proceeds of which were not carried to the Exchequer accounts by 4th August, 1917.

the new War Loan. Since their date of first issue (3rd June, 1916), they have yielded to the Exchequer £23,561,000 net. (Total receipts, £29,878,500, less £6,317,500, representing cancellation of certificates tendered as subscriptions to War Loan.) Full particulars concerning War Expenditure Certificates were given in our last report. At the time sales of these certificates were discontinued, they were issued at a price of £89 per cent., redeemable in two years at par. Up to the time of the preparation of this report, there has been no re-issue of War Expenditure Certificates.

VI. EXCHEQUER BONDS

At the time our report was written last year, three different issues of Exchequer Bonds of unlimited amount were on daily sale by the Treasury, namely, 5 per cent. bonds in denominations of £100, £200, £500, £1,000, and £5,000, repayable 5th October, 1919, or 5th October, 1921, at the option of the applicant, and obtainable through the Bank of England or any other bank; and a Post Office issue of 5 per cent. bonds in denominations of £5, £20, and £50, repayable 1st December, 1920, and obtainable through any Post Office Money Order Office, or any bank.

On Wednesday, 27th September, 1916, the Treasury announced the cessation of sales of the Exchequer Bond issue repayable 5th October, 1919; and the issue from 2nd October, 1916, of new bonds repayable 16th February, 1920, bearing interest at 6 per cent. per annum, payable half-yearly on 16th February and 16th August, in denominations of £100, £200, £500, £1,000, and £5,000, as before. The prospectus also stated (as in the case of the 5 per Cent. Bonds and the 4½ per Cent. Loan) that in the event of future loans (other than issues made abroad or issues of Exchequer Bonds, Treasury Bills, or similar short-dated securities) being raised by H.M. Government for the purpose of carrying on the war, bonds of this issue would be accepted as the equivalent of cash to the amount of their face value for the purpose of subscription to any such loan, interest accrued to the date of the surrender of a bond to be paid in cash.

The issue of 5 per Cent. Exchequer Bonds was entirely suspended after Friday, 20th October. A Post Office issue of the 6 per

Cent. Bonds in denominations of £5, £20, and £50 became available on Monday, 16th October.

The object of the Government in raising the rate of interest on Exchequer Bonds was threefold: first, to quicken the inflow of loans of a comparatively short-dated character until a favourable opportunity presented itself for the issue of a long-dated spectacular loan; second, to stabilise the neutral exchanges by attracting foreign money; third, to endeavour to deflect new money from Treasury Bills into Exchequer Bonds, on account of the longer-dated character of the latter. To help the latter intention, Treasury Bill rates for six and twelve month maturities were reduced on Wednesday, 27th September, from $5\frac{3}{4}$ and 6 per cent. respectively to the uniform rate of $5\frac{1}{2}$ per cent., the ruling rate for three-month maturities. For some time previous to the introduction of the new issue, sales of Exchequer Bonds had exhibited a tendency to decline. Exchequer receipts from this source of borrowing averaged only £4,383,000, per week for the quarter ending 30th September, 1916, as against £21,538,000 per week for the same period from increase in the amount of outstanding Treasury Bills, which on 30th September, 1916, amounted to £1,041,488,000.

The introduction of 6 per Cent. Exchequer Bonds occasioned a general chorus of criticism from all financial quarters. It was felt that the raising of the rate of interest was a mistaken policy. There was much resentment at the idea that British credit had depreciated to such an extent as to require the stimulus of a 6 per cent. rate of interest to support an adequate flow of new money. As was to be expected, the announcement of the new issue had an immediate and disastrous effect on the capital value of all existing investment securities. According to the compilations of the *Bankers' Magazine*, the aggregate capital value of 387 representative securities fell in the period 20th September–20th October, 1916, from £2,896,390,000 to £2,831,082,000—a difference of £65,000,000. By 20th November, there was a further depreciation of £33 000,000; and by 18th December, a further depreciation of £39,000,000. For the month ending 20th September (before 6 per cent. Exchequer Bonds were issued) there had been a depreciation of only £2,106,000, and for the month ending 19th August an actual appreciation of £5,314,000.

Holders of the $4\frac{1}{2}$ per Cent. Loan manifested considerable

displeasure at the introduction of the 6 per Cent. Exchequer Bonds. The new issue appeared to them to indicate the Treasury's intention to defer as long as possible the exercise of the option possessed by holders of the $4\frac{1}{2}$ per Cent. Loan of converting into any future issues of a long-dated character. Between 27th September and 3rd October, the market price of the $4\frac{1}{2}$ per Cent. Loan fell from £96 to £92½, and holders began to fear that their "conversion rights" had no value. They were, however, to some extent reassured by a statement in the House of Commons by the Chancellor of the Exchequer to the effect that a long-dated loan would follow in due course, in which all undertakings to the holders of the $4\frac{1}{2}$ per Cent. Loan would be amply fulfilled.

Possibly this much-criticised issue of 6 per Cent. Exchequer Bonds was due to the fact that the Government of the day did not sufficiently realise that, as time goes on, the rate of interest, in itself, has less and less influence in attracting war loans of sufficient amount, the main factors making for large aggregate subscriptions being widespread, continuous appeals to patriotism; every conceivable facility for the public making applications; popular forms of loans; and an occasional gentle hint, particularly to those quarters where resources available for loans are known to be large, that compulsory investment will be necessary if sufficient amounts of voluntary subscriptions are not continuously forthcoming. Provided proper steps are taken for attracting loans, we estimate that at least £50,000,000 a week might flow into the Exchequer at a reasonable rate of interest.

Some allowance should be made for the fact that a high rate of interest has considerable influence in encouraging people to save and in preventing extravagance and unnecessary consumption. It may be doubted whether the public would have borrowed £200,000,000 from the banks in order to subscribe to a $3\frac{1}{2}$ per Cent. or 4 per Cent. Loan. Subscriptions to War Loans are stimulated, too, by the Treasury restrictions on other appeals for new capital.

Treasury sales of 6 per cent. Exchequer Bonds were discontinued on Monday, 1st January, 1917, partly in view of the imminence of the issue of the long-promised new War Loan.

The following table shows the weekly Exchequer receipts from sales of 6 per cent. Bonds since they were first issued on 2nd October, 1916.

SIX PER CENT. EXCHEQUER BONDS, <i>repayable 16th February, 1920</i>		Exchequer Receipts.
Week ending		
Oct.	7, 1916.	20,621,000
"	14, "	16,006,000
"	21, "	13,279,000
"	28, "	14,231,000
Nov.	4, "	12,479,000
"	11, "	12,726,000
"	18, "	12,508,000
"	25, "	10,192,000
Dec.	2, "	12,212,000
"	9, "	9,480,000
"	16, "	10,025,000
"	23, "	6,251,000
"	30, "	9,194,000
Jan.	6, 1917.	1,327,000
"	7 to Feb. 17	420,700
		<hr/> £160,951,700 <hr/>

The fact that the weekly receipts rapidly declined after a few weeks, proves that the rate of interest in itself was not sufficient to maintain the early rate of sales.

A prospectus of a new daily issue of 5 per Cent. Exchequer Bonds was published on Friday, 13th April, 1917. Bonds of this issue are repayable at par on 1st April, 1922; but a holder, on giving three calendar months' notice in the prescribed form, may require repayment at par on 1st October, 1919. They are issued in denominations of £100, £200, £500, £1,000, and £5,000, as in the case of the earlier issues. It is stated in the prospectus that bonds of this issue will be accepted at their nominal value, with due allowance for any unpaid interest thereon, by the Commissioners of Inland Revenue in satisfaction of amounts due on account of Death Duties or of Excess Profits Duty, and by the Ministry of Munitions in satisfaction of amounts due on account of Munitions Exchequer Payments; provided, in the case of Death Duties, that such Bonds have formed part of the estate of the deceased continuously up to the date of death from the date of the original subscription or for a period of not less than six months immediately preceding the date of death: and, in the case of Excess Profits Duty or Munitions Exchequer Payments,¹ that they have been held continuously by the firm, company, or other person, liable for such duty or payment, since the date of the original

¹ The Finance Act of May, 1917, merged the Munitions Levy into the Excess Profits Duty.

subscription or for a period of not less than six months before such duty or payment becomes due and payable.

A Post Office issue of the new 5 per Cent. Bonds commenced on Wednesday, 25th April, in denominations of £5, £20, and £50.

The weekly Exchequer Receipts from the new issue of Exchequer Bonds up to 4th August, 1917, are shown in the table appended—

FIVE PER CENT. EXCHEQUER BONDS (repayable 1st October, 1919, or 1st April, 1922)	
Week ending—	Exchequer Receipts.
Apr. 14, 1917.	£2,609,000
" 21, "	6,691,000
" 28, "	5,534,000
May 5, "	4,005,000
" 12, "	3,746,000
" 19, "	3,913,000
" 26, "	2,825,000
June 2, "	2,502,000
" 9, "	5,226,000
" 16, "	2,603,000
" 23, "	3,056,000
" 30, "	2,867,000
July 7, "	4,929,000
" 14, "	2,366,000
" 21, "	3,359,000
" 28, "	2,735,000
Aug. 4, "	3,683,000
	<u>£62,649,000</u>

In the following table is shown the Exchequer Receipts, up to 4th August, 1917, from daily sales of the various issues of Exchequer Bonds (issued at par) since the commencement of the war—

From daily sales of—	Repayable	Exchequer Receipts up to 4th Aug., 1917.
5 per Cent. Exchequer Bonds, Oct. 5, 1919 .		£34,262,604
5 per Cent. Exchequer Bonds, Dec. 1, 1920 .		237,829,469
5 per Cent. Exchequer Bonds, Oct. 5, 1921 .		62,495,527
5 per Cent. Exchequer Bonds, Oct. 1, 1919, or Apr. 1, 1922 ¹		62,649,000
6 per Cent. Exchequer Bonds, Feb. 16, 1920 .		160,951,700
		<u>£558,188,300</u>

The Treasury has also received since the commencement of the war £47,942,345 through sales (in March, 1915) of 3 per Cent. Exchequer Bonds on the old system of tender.

¹ The only issue running on 4th August, 1917.

VII. WAR-SAVINGS CERTIFICATES

These certificates, particulars concerning which were given in our last report (p. 289), are sold at a fixed price of 15s. 6d. each, and entitle the purchaser to £1 (free of income tax) for each certificate at the end of five years from date of purchase, with a maximum limit of 500 certificates to one person. They were first issued on 19th February, 1916. Up to 4th August, 1917, the Exchequer had received £87,200,000 from this source of borrowing. During the issue of the 5 per Cent. War Loan (12th Jan.-16th Feb., 1917), and for about three weeks afterwards, sales of War-Savings Certificates showed a considerable expansion, as is disclosed by the table appended—

WEEKLY EXCHEQUER RECEIPTS FROM SALES OF
WAR SAVINGS CERTIFICATES FOR PERIOD 26TH NOVEMBER, 1916-
31ST MARCH, 1917

Week ending	Receipts £	Week ending	Receipts. £
Dec. 2, 1916 .	1,050,000	Feb. 3, 1917 .	2,000,000
" 9. . . .	900,000	" 10 . . .	3,000,000
" 16. . . .	900,000	" 17 . . .	5,000,000
" 23. . . .	600,000	" 24 . . .	7,000,000
" 30. . . .	300,000	Mar. 3 . . .	4,000,000
1917.			
Jan. 6. . . .	1,000,000	" 10 . . .	3,500,000
" 13. . . .	1,200,000	" 17 . . .	1,000,000
" 20. . . .	1,100,000	" 24 . . .	200,000
" 27. . . .	1,500,000	" 31 . . .	2,000,000

The increased sales of War-Savings Certificates during the period 12th January-10th March, 1917, was undoubtedly due to the widespread nature of the public and Press appeals that were made to patriotism whilst the application lists for the new War Loan remained open. People who did not desire or see their way to subscribe to the War Loan "did their bit" by purchasing War Savings Certificates.

On Friday, 29th June, 1917, the Treasury issued the following classification of sales of War-Savings Certificates since they were first issued, and up to 16th June.

CLASSIFICATION OF SALES OF WAR-SAVINGS CERTIFICATES

From 19th February, 1916, to 16th June, 1917

25,212,700	Single Certificates at 15s. 6d.	19,539,842	10	0
604,948	£12 Certificates at £9 6s.	5,626,016	8	0
907,657	£25 Certificates at £19 7s. 6d.	17,585,854	7	6
54,670	£500 Certificates at £387 10s.	21,184,625	0	0
168,213	Certificates for various amounts between £25 and £500—equivalent to single 15s. 6d. Certificates	24,904,173	19,300,734	1 6
26,948,188	Equivalent to 107,402,674 single 15s. 6d. Certificates of the total value of	£83,237,072	7	0

The following table shows the quarterly Exchequer receipts from sales of War Savings Certificates since they were first issued—

QUARTERLY EXCHEQUER RECEIPTS FROM
SALES OF WAR SAVINGS CERTIFICATES

Quarter ending	Receipts.	Weekly Average.
Mar. 31, 1916 (6 weeks)	£ 1,250,000	£ 208,000
June 30, 1916	3,950,000	304,000
Sept. 30, 1916	24,500,000	1,885,000
Dec. 31, 1916	11,800,000	908,000
Mar. 31, 1917	32,500,000	2,500,000
June 30, 1917	9,800,000	754,000
Aug. 4, 1917 (5 weeks)	3,400,000	680,000
Feb. 19, 1916–Aug. 4, 1917	87,200,000	1,147,000

VIII. THE THIRD WAR LOAN

5 per Cent. and 4 per Cent. The chief internal financial event of the third year of war up to this date was undoubtedly the issue of the long-promised new War Loan, and the record amount of the subscriptions thereto. This loan was designed to pay off a large amount of floating debt and also to raise new money for the war. The first definite indication that the new loan was imminent came on Monday, 1st January, 1917, in the cessation of sales by the Government of Exchequer Bonds and War Expenditure Certificates. Three days later, namely, on Thursday, 4th January, the Government announced that no further sales of Treasury Bills would be made at present. On Saturday, 6th January, an official announcement was made of the date of issue of the new loan. On Thursday, 11th January, at a mass meeting held at the Guildhall, the Chancellor of the Exchequer

announced the terms of the new loan, the actual prospectus being issued the following day. The main features of the new loan are shown in the following extracts from the prospectus, from which it will be observed that the chief feature was that it consisted of two separate issues: one bearing 5 per cent. per annum interest, subject to income tax, and issued at £95 per cent.; the other bearing 4 per cent. per annum interest, free of income tax, and issued at par—

**ISSUE OF
£5% WAR LOAN,
1929-1947.
IN STOCK OR BONDS.**

Interest payable 1st June and 1st December.
First Dividend as follows, payable 1st June,
1917, on

"Fully-paid Allotments," £1 8 9%
"Instalment Allotments," £0 11 10%

Price of Issue £95 per Cent.

Payable as follows—

1. For FULLY-PAID ALLOTMENTS:

On Application £95%

2. For INSTALMENT ALLOTMENTS:

On Application		£5%
" Friday,	2nd March, 1917	£15%
" "	23rd "	£15%
" Wednesday,	18th April, "	£20%
" "	9th May, "	£20%
" "	30th " "	£20%

£95%

**ISSUE OF
£4% WAR LOAN,
1929-1942.
("Income Tax compounded.")
IN STOCK OR BONDS.**

Interest payable 15th April and 15th October.
First Dividend as follows, payable 15th April,
1917, on

"Fully-paid Allotments," £0 12 8%
(The first Dividend on Instalment Allotments
will be the full half-year's Interest payable
15th October, 1917.)

Price of Issue £100 per Cent.

Payable as follows—

1. For FULLY-PAID ALLOTMENTS:

On Application £100%

2. For INSTALMENT ALLOTMENTS:

On Application		£5%
" Friday,	2nd March, 1917	£15%
" "	23rd "	£20%
" Wednesday,	18th April, "	£20%
" "	9th May, "	£20%
" "	30th " "	£20%

£100%

THE GOVERNOR AND COMPANY OF THE BANK OF ENGLAND are authorised to receive applications for the above Loans, which will take the form of Stock or Bonds to Bearer at the option of Subscribers; Stock may be inscribed as transferable in the Stock Transfer Books, or may be registered as transferable by deed.

Applications, which may be for either Loan, must be for sums which are multiples of Fifty Pounds, and may be for either

(1) "Fully paid Allotments," or (2) "Instalment Allotments."

They will be received at the BANK OF ENGLAND LOANS OFFICE, 5 AND 6 LOMBARD STREET, LONDON, E.C.; and may be forwarded either direct, or through the medium of any Banker or Stockbroker in the United Kingdom.

British Government Treasury Bills will be accepted under discount at 5 per cent. per Annum, and War Expenditure Certificates will be accepted under discount at 5½ per cent. per Annum, in both cases as from the 16th February, 1917, in lieu of cash, in payment for "Fully-paid Allotments," provided that the entire proceeds of the Bills and Certificates are so applied.

If not previously redeemed, the Loans will be repaid at par as follows—

£5 per Cent. War Loan, 1929-1947,
on the 1st June, 1947;

£4 per Cent. War Loan, 1929-1942,
on the 15th October, 1942;

but His Majesty's Government reserve to themselves the right to redeem the Loans, or either of them, at par at any time on or after the under-mentioned dates, on giving three calendar months' notice in the *London Gazette*—

£5 per Cent. War Loan, 1929-1947,
at any time on or after the 1st June, 1929.

£4 per Cent. War Loan, 1929-1942,
at any time on or after the 15th October, 1929.

As soon as the necessary statutory authority has been obtained, arrangements will be made for the acceptance by the Commissioners of Inland Revenue of Stock and Bonds of these Loans at their respective issue prices, with due allowance for any unpaid interest accrued thereon, in satisfaction of amounts due on account of death duties, provided such Stock and Bonds have formed part of the Estate of the deceased for a period of not less than six months immediately preceding the date of death.¹

For the purpose of providing against depreciation in the market prices of the Loans, the Treasury undertake to set aside monthly a sum equal to one-eighth of 1 per cent. of the amount of each Loan to form a fund to be used for purchasing Stock or Bonds of either Loan for cancellation whenever the market price falls below the issue price. Whenever the unexpended balance of such fund reaches £10,000,000, the monthly payments for the time being will be suspended, but they will be resumed as soon as the unexpended balance falls below £10,000,000.

Stock will be transferable in any sums which are multiples of a penny. Bonds to Bearer will be issued in denominations of £50, £100, £200, £500; £1,000, and £5,000.

CONVERSION OF

£4 10s. per Cent. War Loan, 1925-1945.
£5 per Cent. Exchequer Bonds, due 5th October,
1919 and 1921.

£5 per Cent. Exchequer Bonds, due 1st December,
1920.
£6 per Cent. Exchequer Bonds, due 16th February,
1920.

Holders of the above issues, in fulfilment of the options granted in the several Prospectuses relating thereto, may convert their holdings, in whole or in part, as on the 16th February, 1917, and receive in lieu thereof £5 per cent. War Loan, 1929-1947, and or £4 per cent. War Loan, 1929-1942, at the rate of

£105 5s. 3d. £5 per cent. War Loan, 1929-1947, for each £100 converted;
or

£100 os. od. £4 per cent. War Loan, 1929-1942, for each £100 converted.

Holdings of these issues do not carry any rights of conversion into any future issue that may be made by His Majesty's Government.

The Lists for both Cash and Conversion Applications will be closed on Friday, the 16th February, 1917.

BANK OF ENGLAND, 11th January, 1917.

The lists were open for five weeks, yet the prospectus offered no inducement in the shape of discount to intending applicants, who desired to pay up in full, to subscribe much before the last day fixed for the receipt of applications, namely, 16th February: for the amounts of the first interest payments proved that interest

¹ On 17th January, 1917, the Treasury announced that this condition would be waived in favour of holdings of the new Loan (whether acquired by cash subscription or by conversion) which had formed part of the estate of the deceased continuously up to the date of death from the date of the original subscription or application for conversion.

only commenced to run from 16th February. This omission occasioned some comment, as tending to retard early fully-paid applications and to cause a great rush during the last few days of the issue of the loan. But the Treasury on 17th January made the following announcement—

“ In order that early applicants for the loan may not suffer loss in interest for the whole period during which the subscription list remains open, a special interest payment will be made at the following rates in respect of all applications which are paid for in cash, and not by the discounting of Treasury Bills or War Expenditure Certificates, and are lodged at any bank in the United Kingdom before the close of January—

To applicants for “ Fully-paid Allotments ”	3s. 4d. per cent. ¹
To applicants for “ Instalment Allotments ” of £500 and upwards	2d. per cent. ¹

Warrants for this payment will be issued by the Bank of England with the allotment notices.”

The effect of the above offer was to accelerate the receipt of applications for fully-paid stock and bonds, and to cause a special inrush of applications during the last few days of January.

In the case of subscriptions on the instalment principle, the prospectus stated that the instalments might be paid in full on or after 2nd March, 1917, under discount at the rate of 4 per cent. per annum, discount in cases where payment was made between two instalment dates to be calculated from the instalment date next succeeding the date of such full payment.

Two novel features of the terms of issue, as shown by the extracts from the prospectus, were the provision of a sinking fund and the acceptance in future of the stock and bonds in payment for Death Duties. The object of these two provisions is obviously to exert a steadying influence on the future market price of the loans. The acceptance of the stock and bonds at their issue price in payment for Death Duties must materially lessen any volume of forced selling of the 5 per cent. and 4 per cent. loans in connection with the realisation of deceased estates. Whether the stock and bonds can be maintained at their issue price during the remainder of the war, only experience can show; but there is every reason to believe that market prices will be above issue prices

¹ On the amount applied for.

shortly after the war. Judging by the rapid appreciation in Government credit after the close of the Napoleonic Wars, it appears to be very probable that the Government will be able to convert the present 5 per cent. and 4 per cent. loans to lower rates of interest on 1st June, 1929, and 15th October, 1929, the respective dates from which the Government has reserved the right to redeem the loans. The then outstanding amount of the loans will not, of course, be actually paid off in 1929, but holders will be invited to exchange their holdings for stock or bonds bearing a lower rate of interest, objectors being paid off in cash, raised, if necessary, by sales of the new issue in 1929. *In connection with the future, it is worth remembering that Government credit at all times is largely governed by the excess of production over consumption by the community. As the excess increases, the rate of interest on gilt-edged securities tends to fall; as the excess diminishes, the rate of interest tends to rise.*

In the matter of the true interest yield from the 5 per Cent. Loan, there has been considerable discussion and some difference of opinion. Owing to the loan being issued at a discount, the yield can be considered from three different standpoints, as shown below—

1. The actual half-yearly interest payments are equivalent to £2 12s. 7½d. per cent. on the issue price, or a yearly rate of £5 5s. 3d. per cent. payable half-yearly. If the half-yearly interest payment due 1st June in each year be invested on that date until 1st December, the date of the second half-yearly interest payment, at the rate of £5 5s. 3d. per cent. per annum, payable half-yearly, the total yield per annum would be £5 6s. 7½d. per cent., plus a payment of £5 at date of redemption or conversion.

2. If the prediction of the loans being converted in 1929 be fulfilled, and the cash payment of £5 due at the date of redemption be considered as discounted over the period 16th February, 1917–1st June, 1929, the true half-yearly yield on the issue price of the 5 per Cent. Loan during the period 16th February, 1917–1st June, 1929, will be £2 15s. 8d. per cent., or a yearly rate of £5 11s. 4d. per cent., payable half-yearly. If the half-yearly interest payment due 1st June in each year be invested on that date until 1st December, the date of the second half-yearly interest payment, at the rate of £5 11s. 4d. per cent. per annum, payable

half-yearly, the total yield per annum would be £5 12s. 10½d. per cent.

3. Should the 5 per Cent. Loan be not redeemed or converted until 1947, and the cash payment of £5 due at the date of redemption be considered as discounted over the period 16th February, 1917–1st June, 1947, the true half-yearly yield on the issue price of the 5 per Cent. Loan during the period 16th February, 1917–1st June, 1947, will be £2 13s. 4d. per cent., or a yearly rate of £5 6s. 8d. per cent., payable half-yearly. If the half-yearly interest payment due 1st June in each year be invested on that date until 1st December, the date of the second half-yearly interest payment, at the rate of £5 6s. 8d. per cent. per annum, payable half-yearly, the total yield per annum would be £5 8s. 1½d. per cent.

Whether the 5 per Cent. Loan be converted in 1929 or 1947, the yield, it must be admitted, is too high a rate for the British Government to have contracted to pay for long periods. There is reason to believe that, if the 5 per Cent. Loan had been issued at par, affording a half-yearly yield of £2 10s. per cent. or a true yearly yield of £5 1s. 3d. per cent., it would have met with practically the same success as actually experienced with the issue price at £95 per cent. In the case of the ultra-patriotic people who sold out their old investments, often at a sacrifice, in order to put the money thus obtained into the War Loan, an issue at par would actually have brought *more* money into the Treasury, because these investors could have sold their old securities at the higher prices which prevailed before the War Loan was issued.

From the time of the Chancellor of the Exchequer announcing at the Guildhall the terms of issue of the new loan and up to the closing of the lists on 16th February, 1917, a widespread campaign to popularise the loan was undertaken by the Government, loyally and unanimously supported by the Press, the banks, and the stockbrokers. The banks and stockbrokers sent out to their customers a copy of the prospectus, accompanied by a strong letter-appeal from the Chancellor of the Exchequer. The banks publicly advertised that they were prepared to grant loans not only to existing customers but to strangers to enable them to subscribe to the War Loan, provided the applicants were in a position to pay off the advances within a reasonable time—the expression “reasonable time” generally being understood to mean

periods ranging from six months to two years, according to the individual circumstances of the applicants. The object of this offer, which, it is to be noted, was made after consultation with the Chancellor of the Exchequer, was twofold: first, to endeavour to lead to reduced consumption of goods and services through the individual mortgaging for a period part of his future income; secondly, to obviate, if possible, the banks themselves being called upon to subscribe on a large scale to the loan. To the $3\frac{1}{2}$ per Cent. Loan issued in November, 1914, the banks, on request by the Government, subscribed about £100,000,000, and to the $4\frac{1}{2}$ per Cent. Loan issued in June, 1915, about £200,000,000. We pointed out in our last report that bank subscriptions to War Loans cause an expansion in the aggregate of the credit balances due to their customers, for when banks subscribe to war loans, taking the banks collectively, they in net effect, as the report showed, contract with the Government, in return for a certain rate or rates of interest, to credit the amount of their subscriptions to customers to whom payments are due from the Government for goods and services. This the banks are able to do because they are the generally accepted custodians of credit. The policy of financing the necessities of war by a great extension of bank credit is dangerous, because it inevitably leads to inflation of prices of commodities,¹ through monetary causes, by reason of an increase in the purchasing power of the community, and eventually gives rise to growing discontent among the masses.

The rate of interest which the banks agreed to charge the public for temporary advances devoted to applications for the War Loan is generally understood to have been 1 per cent. under Bank Rate, with a minimum of 5 per cent.

The public had every facility presented to them for making applications for the War Loan, for, as the prospectus stated, subscriptions were made receivable in multiples of £50, through the medium of any bank or stockbroker in the United Kingdom. At the Post Offices, arrangements were made for receipt of subscriptions under £50 in multiples of £5. To meet the convenience of people who were, for various reasons, unable to attend during ordinary business hours, some of the banks opened their offices in

¹ A lecture on "Statistical Aspects of Inflation" was delivered to the Royal Statistical Society on 19th June, 1917, by Professor J. S. Nicholson.

the evenings for receipt of applications, and to afford information relating to the loan and conversions. It has been brought to our notice that one provincial bank illuminated its various offices at night with a large notice reading: "You may apply for War Loan here—daily, 10 to 3; Thursdays, 9 to 12; Saturdays, 10 to 3; EVENINGS, 6 to 8." With such a spirit permeating financial institutions, the success of the loan was assured.

The first official intimation of the great success of the loan was given by the Chancellor of the Exchequer in a preliminary statement to the House of Commons on Monday, 19th February, 1917. The Chancellor stated that the total amount of new money would certainly exceed £700,000,000; but the exact amount was not on that date ascertainable, because between 200,000 and 300,000 applications had yet to be examined. A week later, on Monday, 26th February, the Chancellor announced in the House that his estimate of unexamined applications had proved to be much below the mark, and that the success of the loan had exceeded all expectations, the total amount applied for having just exceeded £1,000,000,000, made up as follows—

Applications through the Bank of England	£ 819,586,000
Amount of Treasury Bills converted	130,711,950
Applications through the Post Office	30,715,000
Amount received during the currency of the applications for the loan through War Savings Certificates	19,300,000
Total	<u>£1,000,312,950</u>

Of the total amount applied for, only £22,000,000, or about 2 per cent. of the total, represented applications for the 4 per Cent. Tax-free Loan. For many months previous to the issue of the War Loan, the Government had been advised by sundry persons that a tax-free loan would prove very popular. The result shows that such a loan was at that time unpopular, investors preferring to accept uncertainties in the rate of future income tax to the deduction of a fixed rate for the duration of the loan. Later, when the daily growing cost of the war made it certain that the income tax must soon be raised, the 4 per Cent. Loan began to be bought, and by 7th June its price was £101, while the 5 per Cent. stood at 94½.

The Chancellor's explanation of including converted Treasury Bills in the total amount of the loan was that Treasury Bills are for comparatively short dates, the average at the time the loan was issued being about four months. Sales of War Savings Certificates during the currency of the applications for the loan were included because such sales received a great impetus on account of the widespread appeals that were then made to patriotism.

With reference to the number of applications for the loan, we quote the Chancellor's statement on this matter verbatim—

"The number of applications to this loan was, through the Bank, 1,089,000; but that does not in reality represent all the individuals, because many of these loans were made by firms on behalf of employees. The number of applications through the Post Office was 1,000,000. As regards War Savings Certificates, it is not possible to give more than an estimate, for the reason it is probable that some individuals bought more than one certificate. There were 400,000 who took sums of £12 and upwards, and these may be regarded as individual subscribers. The number of 15s. 6d. certificates sold was 5,600,000, and it is a safe assumption that they represent an average of two to each individual. That means an addition to the subscribers of 2,800,000, making the total number of subscribers to this loan 5,289,000. Compare this with the German figures. To the fifth loan the number of subscribers was 3,810,000, to the fourth 5,280,000, again showing a falling off in the latest loan as compared with the previous loan. But, in the German loan, every subscriber of a shilling and upwards was included; but in our War Savings Committees, arrangements are made to receive, week by week, small subscriptions until they reach 15s. 6d.: and I am informed that if every applicant of that kind were taken into account, the total number of applicants to this loan would not be less than 8,000,000 people, as against the last German loan of 3,810,000, while the population of Germany is nearly 50 per cent. greater."

Further and more exact figures concerning the success of the War Loan, coupled with full particulars as to conversions of the 4½ per Cent. Loan and Exchequer Bonds, were given to the House of Commons on Wednesday, 2nd May, 1917, by the Chancellor of the Exchequer in his Budget Speech, from which the following table has been compiled.

THE GREAT WAR LOAN OF 1917

	5% War Loan issued at £95.	4% War Loan issued at Par.	Total Nominal Amount.
	£	£	£
New Subscriptions, including Treasury Bills of £130,711,950 . .	966,048,000	22,658,000	988,706,000 ¹
Stock and Bonds exchanged for 4½ per Cent. War Loan . .	821,005,000	28,726,000	1,132,523,000
5 and 6% Exchequer Bonds . .	282,792,000		
Total issued against Conversions.	1,103,797,000	28,726,000	1,132,523,000
Total Stock and Bonds outstanding of 5 and 4 per Cent. Loans	2,069,845,000	51,384,000	2,121,229,000

The above table is exclusive of receipts from sales of War Savings Certificates.

Not all holders of the 4½ per Cent. Loan of 1915 and of Exchequer Bonds exercised their option to convert into the new loan, as will be seen from the following percentages given by the Chancellor in his statement—

	Of outstanding amount of		
	4½ per Cent. War Loan.	Exchequer Bonds.	
		5 per Cent.	6 per Cent.
Percentage converted into New War Loans	97.5	61.9	12.9

The small percentage of 6 per Cent. Exchequer Bonds converted is explained by the loss in interest up to 16th February, 1920 (date of redemption of 6 per Cent. Bonds), that would be involved to the holder by the act of conversion, though, if a permanent holder, he would probably in the long run gain by conversion.

¹ Cash, 5 per cent. loan, £917,746,000; 4 per cent. loan, £22,658,000. Total, £940,404,000.

The final figures of the great War Loan are as follows—

Exchequer Receipts (up to 4th August, 1917), £946,926,710.

NUMBER OF APPLICATIONS¹

Five per Cent. War Loan—

Number of applications through the Banks of England and Ireland	1,066,111
Through the Post Office	932,742
Total	<u>1,998,853</u>

Four per Cent. War Loan—

Total number of applications	24,771
--	--------

An interesting feature about the new loan was that from 70 to 80 per cent. of the total amount of applications was paid up in full. Such a percentage means that the banks had to make arrangements to pay over to the Treasury, in the course of a few weeks, between £600,000,000 and £650,000,000 (after making allowance for surrender of Treasury Bills by applicants), an amount approximately equal to half the total amount of their customers' credit balances, usually termed deposits.

In the interval between the cessation of sales of Treasury Bills, War Expenditure Certificates, and Exchequer Bonds, and the ingathering of the proceeds of the War Loan, the war was financed by Ways and Means temporary advances from the Bank of England (in reality, the creation of credits in the books of the Bank of England), and receipt of ordinary revenue. The greater part of the proceeds of the War Loan was applied as gathered to reduction in Ways and Means advances and payment of maturing Treasury Bills. On 31st December, 1916, the outstanding Ways and Means advances amounted to £141,156,000. By 10th February, 1917, the amount had reached a maximum of £420,806,000. Thereafter it fell, reaching £217,526,500 on 31st March, 1917. The outstanding amount of Treasury Bills was £1,115,815,000 on 31st December, 1916; £909,046,000 on 10th February, 1917; and £463,705,000 on 31st March, 1917. The actual Exchequer receipts from the new loan up to 31st March, 1917, was £780,376,710; and up to 4th August, £946,926,710, as stated above.

How much relatively greater was the success of the new loan than that of either of the two previous loans is better realised

¹ According to Parliamentary Papers issued 6th July, 1917.

when it is borne in mind that the £332,000,000 loan¹ ($3\frac{1}{2}$ per cent.) raised in 1914 included nearly £100,000,000, and the £592,000,000 loan ($4\frac{1}{2}$ per cent.) raised in 1915 about £200,000,000, in the form of applications from the banks themselves. Moreover, in the case of the latter loan, an artificial stimulus was given to cash subscriptions by the amounts that had to be put in by holders of the $3\frac{1}{2}$ per Cent. Loan and of Consols in order to secure the conversion rights that were then offered to them, particularly the right of further conversion at par into any future issues without further cash payment. The new loan included no direct applications from the banks; but it is true that it included a large amount (some estimates place it as high as £250,000,000) of credit granted by the banks to the public for the purpose of subscribing to the loan. This credit will, however, be nearly all liquidated within a period of two years, the greater part within one year; and so should not give rise to a permanent increase in banking deposits and the economic evils incident to further monetary inflation. But if those who have borrowed from the banks do not repay the loan, their subscriptions are, in effect, bank subscriptions.

From whatever standpoints the loan of early 1917 be judged, it is clear that the result far exceeded the amount subscribed to any of Germany's loans, a list of which is given at the foot of page 267 for the purposes of comparison.

Finally, it has to be recorded that to a very considerable extent the success of the War Loan was due to the close co-operation between the Government and the banks, and the direct encouragement given by the banks to their customers to subscribe. During the issue of the $3\frac{1}{2}$ and $4\frac{1}{2}$ per Cent. Loans, there was some trepidation on the part of the banks as to the extent their deposits would be finally depleted by customers' subscriptions to the loans. It is now recognised by the banks that the net effect of the issue of war loans on themselves is a series of internal transfers of credits among their customers and themselves. Some of the banks, it is true, after Government disbursements get more than their share of the credits of other banks; but this happens continuously in peace times, when settlement is made between the banks of final differences due to cross-crediting of customers' drawings. Once credits are created in a banking system, they

¹ Cash, £332,000,000; nominal, £350,000,000.

can never be extinguished, unless they be permanently withdrawn in legal tender, which is hoarded or sent abroad, or are absorbed in liquidation of bank loans, public or private.

IX. BRITISH LOANS RAISED IN AMERICA

Prior to the third year of war, apart from banking credits, the only loan arranged in the United States of America on behalf of the Government of Great Britain was the joint Anglo-French Loan for \$500,000,000 (roughly, £100,000,000), issued during October, 1915, in the form of 5 per cent. bonds, free of all British and French taxes. The proceeds of the loan were divided equally between Great Britain and France. The bonds were jointly guaranteed by Great Britain and France, and no collateral security was required. They were made repayable at the end of five years, or convertible at the option of the holder into $4\frac{1}{2}$ per cent. bonds of the British and French Governments, repayable not earlier than fifteen years and not later than twenty-five years from the date of the present loan. The bonds were issued to the American public at the price of 98 and, therefore, including redemption, will yield £5 9s. 3d. per cent. The whole issue was sold to an underwriting syndicate at the price of 96. Therefore, so far as the British and French Governments are concerned, the cost of the loan is equal to £5 18s. 10d. per cent. per annum. Professor Dicksee observes: "This Loan was an extraordinary affair, reflecting little credit upon the British representatives." To find the real cost to the

GERMANY'S WAR LOANS

	Amount raised, including Conversions of Floating Debt.		No. of Subscribers	
			£10 and under.	Total.
	Marks.	£		
1st Loan, Sept. 1914	4,481,000,000	224,050,000	231,112	1,177,235
2nd " Mar., 1915	9,106,000,000	455,300,000	452,113	2,694,063
3rd " Sept. 1915	12,163,000,000	608,150,000	984,358	3,966,418
4th " Mar., 1916	10,768,000,000	538,400,000	2,406,118	5,279,645
5th " Sept. 1916	10,699,000,000	534,950,000	1,794,084	3,810,696
6th " Mar., 1917	12,770,000,000	638,500,000	—	—
Total amount.	59,987,000,000	2,999,350,000		

For the purpose of converting Marks into sterling, the value of the Mark is taken at 20 to the £, Mint Par being Marks 20.43 = £1.

British taxpayer, an addition should be made for the income tax which would be paid by holders of an internal loan; and this brings the cost to something like $6\frac{3}{4}$ per cent. Yet the Second War Loan had only recently been floated in $4\frac{1}{2}$ per Cents. at £100, subject to an income tax of 3s. At the time the loan was issued, the terms were criticised in the House of Commons as being unduly onerous. Possibly slightly better terms might have been arranged, given longer time for negotiation; but it is essential to remember that prior to the issue of the Anglo-French loan the American public had had little experience in the matter of foreign investments, and that they are able for the most part to invest their money in their own country at high rates of interest.

During the month of August, 1916, the first tangible results of the scheme of mobilisation of foreign securities held in this country was seen by arrangements being made in the United States of America for a loan to the United Kingdom of \$250,000,000 (roughly, £50,000,000) for two years at 5 per cent. per annum, free of all British taxes, which was underwritten at 98 and offered to the public at 99, and based on Canadian, United States, and other foreign securities as collateral. The loan was dated 1st September, 1916, and will mature 1st September, 1918; but the British Government reserved the option of redeeming the loan, in whole or in part, subject to thirty days' notice, on any day up to 31st August, 1917, at 101 and accrued interest, and on any day thereafter up to 31st August, 1918, at $100\frac{1}{2}$ and accrued interest.

Towards the end of October, 1916, details became available of a further loan which was being arranged in America on behalf of the United Kingdom for \$300,000,000 (roughly, £60,000,000), based on Canadian, United States, and other Colonial and foreign securities as collateral, including a relatively small amount of obligations of British railway companies. One half of this loan was in the form of $5\frac{1}{2}$ per cent. three-year notes dated 1st November, 1916, maturing 1st November, 1919, and issued at $99\frac{1}{4}$; and the other half in the form of $5\frac{1}{2}$ per cent. five-year notes dated 1st November, 1916, maturing 1st November, 1921, and issued at $98\frac{1}{2}$ —in each case the interest being free of all British taxes. Each maturity is subject to redemption, in whole or in part, at the option of the British Government, at a premium of 1 per cent. for each year (or any part) of unexpired life of such maturity.

The sale of the notes was underwritten by a powerful syndicate in America at $1\frac{1}{2}$ per cent. below the average offering price.

Towards the end of 1916, there was an increasing recognition in America of the dangers likely to arise from inflation following a continuance of the excessive gold imports into that country. Bankers adopted the view that it was preferable to grant credits to and arrange loans for the Allies rather than to receive too great a quantity of gold, with its influence in stimulating inflation of every kind. Since the outbreak of war and up to the end of 1916, America had received at least \$900,000,000 (roughly, £180,000,000) in gold in part payment of her extremely favourable trade balance. Obviously, this exceptional addition to her gold stocks was undesirable, for as a basis for the expansion of credit it constituted a potential danger.

It is interesting to observe that the great imports of gold during 1916 did not stay in New York during that year, but flowed to the interior banks as a consequence of intensely active and profitable interior trade, following on Europe's enormous purchases of grain, metals, and finished munitions produced in the nearer or further West. Part of the gold went to increase Western and Southern Bank Reserves, and part was drawn into active circulation as a consequence of high wages and of the abnormally high prices prevalent for commodities.

The opinions of American bankers as to the advisability of granting further loans to the Allies, and the dangers of inflation likely to ensue from a continuance of excessive gold imports, were not altogether supported by the Federal Reserve Board of the United States, which on Tuesday, 28th November, 1916, issued a circular to the banking community containing, among other warnings, a caution against locking up their funds in long-term obligations of foreign governments, or in investments which were short-term in form or name, but which, either by contract or through force of circumstances, might in the aggregate have to be renewed until the return of normal conditions. A special warning was issued to the member banks against investing in foreign Treasury bills, on the ground that the borrower must attempt to renew them collectively until such time as it was advantageous to convert them into a long-term obligation. The Board did not subscribe to the freely expressed opinion in America that further

importations of large amounts of gold must of necessity prove a source of danger or disturbance to that country. That danger (the circular stated) will arise only in case the inflowing gold should remain uncontrolled, and be permitted to become the basis of undesirable loan expansion and of inflation. The Board considered that there were means of controlling accessions of gold by proper and voluntary co-operation of the banks, or, if need be, by legislative enactment.

The action of the Federal Reserve Board in issuing a warning circular to banks immediately followed proposals under consideration in America for the issue in that country of British short-term Treasury bills. Later, when it became apparent that war between the United States of America and Germany could not be long delayed, the Federal Reserve Board changed its policy and commended to American bankers the merits of foreign loans.

An interesting loan which put the British Government in possession of, roughly, \$50,000,000 in the United States was arranged early in December, 1916. Japan at this time being in possession of large dollar credit balances in the United States, the British Government raised a loan in Japan for the equivalent of £10,000,000 at 6 per cent. per annum for a period of three years, and, by an exchange operation, devoted the proceeds of the loan to purchasing dollars in America held on Japanese account.

On Thursday, 18th January, 1917, announcement was made of a new British loan to be issued in America for \$250,000,000 (roughly, £50,000,000) at $5\frac{1}{2}$ per cent. per annum interest, based on Canadian, United States, and other Colonial and foreign securities as collateral, including a small amount of British railway securities. The loan was divided into two parts: \$100,000,000 in the form of one-year notes due 1st February, 1918, and issued at 99.52; and \$150,000,000 in the form of two-year notes due 1st February, 1919, and issued at 99.07—the yield in each case being, therefore, 6 per cent. The issue, the lists of which were open from 24th January to 31st January, was made under the auspices of a very strong body of American bankers. Interest is payable free of all British taxes. The notes are convertible upon notice, at the option of the holder, at any time before maturity, or (if called for earlier redemption) at any time up to the date of such redemption, into twenty-year $5\frac{1}{2}$ per cent. bonds of the

United Kingdom, payable 1st February, 1937, and not subject to prior redemption. The British Government reserved the option of redeeming the notes, in whole or in part, on thirty days' notice, on the following terms: One-year notes at 101 plus interest; two-year notes at 102 plus interest up to 1st February, 1918; and at 101 plus interest between 1st February, 1918, and 1st February, 1919.

The British loan raised in the United States at the end of January, 1917, marked the last of a series of loans raised in America by the United Kingdom during the period of American neutrality. So far as Allied payments in America are concerned, an entirely new set of financial conditions arose soon after the entry (on 5th April, 1917) of America into the war on the side of the Allies.

On 14th April, the House of Representatives passed a War Finance Bill for \$7,000,000,000, of which \$5,000,000,000 is to be issued in the form of long-term bonds. Of the latter sum, \$3,000,000,000 is to be available for loans to the Allies, and the remaining \$2,000,000,000 is to be issued in the form of Treasury certificates maturing within twelve months. The first issue of the United States Liberty Loan was made early in May. It was for \$2,000,000,000 at $3\frac{1}{2}$ per cent., tax free, and was greatly oversubscribed, the total applied for being \$3,035,226,850 (roughly, £607,045,000).

The War Finance Act states no exact dates for repayment by the Allies of loans made to them, but stipulates that the loans shall bear the same rate of interest as the American bonds issued to raise the necessary funds; and shall also contain the same terms and conditions. Henceforth the Allies will not have to deposit various securities as collateral to loans, as in the case of previous loans. They will only have to deposit their own Government bonds with the Treasury of the United States. Shipments of gold should no longer be necessary.

Great Britain received her first loan from America under the new arrangements on 25th April, 1917, the amount being \$200,000,000, and the rate of interest payable being 3 per cent. per annum until 30th June, 1917, and thereafter $3\frac{1}{2}$ per cent. until such time as America may have to pay a higher rate to her own bondholders. At an exchange rate of $4.76\frac{1}{2}$, the sterling equivalent of the loan is £41,972,718, this being the actual amount appearing under the

heading "Other Debt created under the War Loan Acts, 1914 to 1916" in the British Exchequer Accounts for the week ending 5th May, 1917. Up to 4th August, the advances made by the American Government to the British Treasury amounted to \$955,000,000 (roughly, £191,000,000).

The extent to which America will be called upon to finance the Allies with loans in her own country is estimated to be about \$500,000,000 a month. It is thought to be extremely improbable that the Allies will devote any of the proceeds of such loans to converting to a lower rate of interest any of the past loans raised in America, in which, as we have already shown, a right of conversion before maturity was reserved. The whole of the new loans will doubtless be required for financing further supplies of food-stuffs and war materials required by the Allies from the United States. Up to 4th August, the advances made by the American Government to the Allies amounted to a total of \$1,868,000,000. This total includes new advances of \$185,000,000 to Great Britain and \$160,000,000 to France on 2nd August.

The following table shows the particulars in brief of the various loans raised by Great Britain in America since the commencement of the war till 4th August, 1917—

BRITISH LOANS RAISED IN UNITED STATES OF AMERICA

Nature of Loan.	Amount.	When issued.	Rate of Interest.	Issue Price.	Date of Maturity.
	Dollars.				
British portion of Anglo-French Loan (no collateral) .	250,000,000	Oct., 1915	5	98	Oct. 15, 1920 ¹
Two-year Coll. Notes	250,000,000	Sept., 1916	5	99	Sept. 1, 1918
Three-year " "	150,000,000	Oct., 1916	5½	99½	Nov. 1, 1919
Five-year " "	150,000,000	Oct., 1916	5½	98½	Nov. 1, 1921
One-year " "	100,000,000	Jan., 1917	5½	99½	Feb. 1, 1918 ²
Two-year " "	150,000,000	Jan., 1917	5½	99	Feb. 1, 1919 ²
	1,050,000,000	25th Apr., to 4th Aug., 1917	3½ ³	100	Indefinite.
American Govt.	955,000,000				

The above table is exclusive of various temporary loans raised in America.

¹ Convertible at option of holder into 4½% bonds, repayable not earlier than fifteen years and not later than twenty-five years from original date of loan.

² Convertible at option of holder into 5½% bonds, maturing in twenty years.

³ 3 per cent. until 30th June, 1917, and thereafter 3½ per cent.

X. GOVERNMENT BORROWINGS AND WAR EXPENDITURE TO DATE

The following table shows the amounts of the various forms of Government borrowing since the commencement of the war up to 4th August, 1917—

		<i>Exchequer Receipts.</i> (2nd Aug., 1914–4th Aug., 1917.)
3½ per Cent. War Loan, 1925–28 ¹		£ 331,798,408
4½ per Cent. War Loan, 1925–45 ²		592,345,604
4 per Cent. War Loan, 1929–42, and	}	946,926,710
5 per Cent. War Loan, 1929–47		
3 per Cent. Exchequer Bonds, due Mar., 1920		47,942,345
5 per Cent. Exchequer Bonds, due Oct., 1919, 34,262,604		
5 per Cent. Exchequer Bonds, due Dec., 1920, 237,829,469		
5 per Cent. Exchequer Bonds, due Oct., 1921, 62,495,527		
5 per Cent. Exchequer Bonds, due Apr., 1922 ³ 62,649,000		
		397,236,600
6 per Cent. Exchequer Bonds, due Feb., 1920		160,951,700
Net increase in Treasury Bills outstanding		742,059,000
War Expenditure Certificates		23,561,000
War Savings Certificates		87,200,000
5 per Cent. U.S.A. Loan (issued Oct., 1915)		50,820,023
Other Debt created under the War Loan Acts, 1914–16 (which includes proceeds of various loans raised in America and one loan in Japan. See Chapter on “British Loans raised in America.”)		520,106,084
Temporary Advances (Ways and Means)		246,131,500
		4,147,078,974
<i>Subtract following issues out of Exchequer—</i>		
Exchequer Bonds redeemed under the War Loan Redemption Act, 1910	16,395,500	
Issues under Section 1 (5) of the War Loan Act, 1915	170,143,313 ⁴	
Exchequer Bonds redeemed under Section 61 of the Finance Act, 1916	1,466,325	
Excess of Sundry Small Issues over Sundry Small Receipts	1,964,189	
		189,969,327
Net borrowings for three years ending 4th Aug., 1917		3,957,109,647
Add Revenue for three years ending 4th Aug., 1917		1,254,724,050
		5,211,833,697
Subtract increase in Exchequer Balances		17,486,038
Total declared expenditure for three years ending Aug. 4, 1917, chargeable against revenue		5,194,347,659

¹ Through Conversions £62,774,000 in issue on 31st March, 1916.

² About £20,000,000 in issue on 4th August, 1917, owing to Conversions.

³ Repayable at par in October, 1919, at option of holder.

⁴ Includes repayments to Bank of England of £160,427,623.

As already stated, the particulars given in the above table are for a complete period of three years of war. In the following tables, Government Revenue, Borrowings, and Expenditure are shown separately for the eight-month period 2nd August, 1914–31st March, 1915; for the fiscal years ending 31st March, 1916 and 1917; and finally for the four-month period 1st April–4th August, 1917. This division clearly discloses the rapid increase in war expenditure during the course of the war—

GOVERNMENT REVENUE, BORROWINGS, AND EXPENDITURE

Year ending 31st March, 1915

Total Expenditure	£ 560,473,533	Revenue	£ 226,694,080
Increase in Exchequer Balances	73,016,433	Net Borrowings	406,795,886
	<u>£633,489,966</u>		<u>£633,489,966</u>

1st April–1st August, 1914 (pre-war)

Total Expenditure	£ 62,113,553	Revenue	£ 54,935,336
Decrease in Exchequer Balances	5,374,131	Net Borrowings	1,804,086
	<u>£56,739,422</u>		<u>£56,739,422</u>

WAR PERIOD

2nd August, 1914–31st March, 1915

Total Expenditure	£ 498,359,980	Revenue	£ 171,758,744
Increase in Exchequer Balances	78,390,564	Net Borrowings	404,991,800
	<u>£576,750,544</u>		<u>£576,750,544</u>

Daily average of Total Expenditure	£2,059,000
Daily average of Total Expenditure for year ending 31st March, 1914 (pre-war)	£541,000

Year ending 31st March, 1916

Total Expenditure	£ 1,559,158,377	Revenue	£ 336,766,824
Decrease in Exchequer Balances	57,875,946	Net Borrowings	1,164,515,607
	<u>£1,501,282,431</u>		<u>£1,501,282,431</u>

Daily average of Total Expenditure	£4,260,000
--	------------

Year ending 31st March, 1917

Total Expenditure .	2,198,112,710	Revenue	573,427,582
Increase in Exchequer Balances	860,853	Net Borrowings . .	1,625,545,981
	<u>£2,198,973,563</u>		<u>£2,198,973,563</u>
Daily average of Total Expenditure	£6,022,000		

1st April—4th August, 1917

Total Expenditure .	938,716,592	Revenue	172,770,900
Decrease in Exchequer Balances .	3,889,433	Net Borrowings . .	762,056,259
	<u>£934,827,159</u>		<u>£934,827,159</u>
Daily average of Total Expenditure	£7,450,000		

THREE YEARS OF WAR

2nd August, 1914—4th August, 1917

Total Expenditure .	5,194,347,659	Revenue	1,254,724,050
Increase in Exchequer Balances	17,486,038	Net Borrowings . .	3,957,109,647
	<u>£5,211,833,697</u>		<u>£5,211,833,697</u>

In reviewing war expenditure, it has to be borne in mind that the Exchequer Expenditure figures include loans to our Allies and Dominions. It was stated by the Chancellor of the Exchequer, in his Budget speech of 2nd May, 1917, that at the end of March, 1917, our Allies and Dominions were indebted to the United Kingdom to the extent of £970,000,000 for war loans and advances, plus accrued interest, Allies accounting for £828,000,000 and Dominions for £142,000,000. When introducing a Vote of Credit on Tuesday, 24th July, the Chancellor stated that advances to Allies and Dominions had been increased by a further £197,000,000 in the period 1st April—21st July, making the total of such advances up to 21st July to be: To Allies, £1,025,000,000; to Dominions, £146,000,000—together £1,171,000,000.

If from the total expenditure for the three fiscal years—1st April, 1914—31st March, 1917—we subtract loans to Allies and Dominions, and the approximate amount of what would have been normal peace expenditure for these years, we obtain approximately the money cost of the war to Great Britain up to 31st March, 1917—

exclusive of capitalisation value of future payments on account of pensions granted as a consequence of the war—

			1st April, 1914 to 31st March, 1917
	Total expenditure		4,318,000,000
Subtract—			
Loans to Allies	£828,000,000		
Loans to Dominions	142,000,000		
Normal Peace Expenditure for year ending—			
Mar. 31, 1915	£207,000,000 ¹		
" " 1916, say,	212,000,000		
" " 1917, say,	217,000,000		
	<u>636,000,000</u>		
			<u>1,606,000,000</u>
Approximate cost of War			<u>2,712,000,000</u>

XI. THE NATIONAL DEBT

In the following table is shown the annual increase in the total amount of the dead weight debt since the commencement of the war—

At 1st April.	Total Amount.	Increase for year.	Amount of Loans to Allies and Dominions.	Total Amount less such loans.
	£	£	£	£
1914 . . .	651,000,000			
1915 . . .	1,108,000,000	457,000,000	52,000,000	1,056,000,000
1916 . . .	2,140,000,000	1,032,000,000	376,000,000	1,764,000,000
1917 . . .	3,854,000,000	1,714,000,000	970,000,000	2,884,000,000
Increase for three years .		3,203,000,000	970,000,000	2,233,000,000

The increase in the National Debt since the commencement of the war is certainly great, but the nation is not running headlong into national bankruptcy as certain Members of both Houses of Parliament have occasionally proclaimed. National bankruptcy is remote, if not impossible, so far as internal finance is concerned. The real meaning of the major part of the increase in the National Debt is that certain members of the community, in return for goods or services directly or indirectly supplied to the Government for the prosecution of the war, have obtained a lien on the future productive power and services of their fellow-countrymen.

¹ Revised Budget estimate given by the Chancellor of the Exchequer before the war.

exclusiv
of pens

Subtr
I
I
Nor
M

In t
amoun
the wa

At 1st

1914
1915
1916
1917

Incr

The
the w
into 1
Parlia
is ren
The r
Debt
goods
ment
futur

¹ F
before

DURING THE THIRD YEAR OF WAR
THE COURSE OF THE BUDGETARY EXCHANGE RATES OF GERMANY

A bad economic feature of the increase in the National Debt is the very high rate of interest payable on the major part of it for a fairly long period. The real measure of national indebtedness at any given time is the total amount of interest payable, per annum, by a country to holders of its obligations, rather than the issued capital amount of the obligations.

SECTION D

I. FOREIGN EXCHANGES

The movements of the principal exchanges on London during the third year of war are given on the inset. It is not possible to give a detailed account of the causes responsible for the various fluctuations disclosed by the tables, largely on account of concealed Government operations: so we only attempt a broad review of the main movements.

The Paris rate has not only been prevented from becoming more unfavourable to France—a movement which was very pronounced during the first two years of war—but some improvement has actually taken place. The attempts by the British and French Governments to stabilise the rate by arrangement of loans and credits, both in London and New York, and through the release of gold by the Bank of France, have been very successful during the third year of war.

Possibly the attempts to stabilise the Russian exchange on London would have met with a similar success but for the uneasiness created by the after-effects of the Russian Revolution. During the first two years of war, exchange on London became increasingly unfavourable to Russia. Between August and December, 1916, the rate showed no further depreciation. During January to May, 1917, there was experienced an upward movement of about 15 full points. The abdication of the Czar in the middle of March had no immediate effect on the Russian exchange, but the after-effects of the revolution—the state of internal disorders and anarchy existing in Russia during June and July—caused a further great depreciation in the exchange on London.

The depreciated Russian exchange should cause very large imports of wheat and other commodities into the United Kingdom

from Russia at low prices for some years after the war, until this exchange recovers itself.

The Italian rate of exchange from August, 1916, showed very little movement until November, from which month the rate on London rapidly became more unfavourable to Italy until the end of March, 1917. A rapid fall took place during April, following enlarged credits arranged to account of Italy, but another upward movement of about a full point took place during June.

Practically no movement has occurred in the New York exchange during the third year of war, this important rate having been maintained in the neighbourhood of 4·76½ by the efforts of the Exchange Committee in London. The rate has been successfully stabilised by the export of gold to America; the repatriation of American securities held by the Allies; the arranging of loans in America with American and other securities pledged as collateral; and since 25th April, 1917, by direct loans from the American Government to the Allies. The United States of America being the country from which the Allies have obtained during the war the major part of their external supplies, it is very gratifying to find that the rate of exchange between New York and London has been successfully maintained at approximately the new gold point during the third year of war.

With regard to the exchanges of the neutral countries, those of Spain and Switzerland have each moved against London, during the third year of war, the former to the extent of about three full points, the latter to the extent of about four full points. This fall has been fairly gradual. The Amsterdam rate rose until March, but has since shown a downward tendency. A tendency to fall is clearly observable in the Copenhagen rate. The Scandinavian exchanges also exhibit a tendency to move more adversely to London, the greater depreciation having taken place in the Stockholm rate. Settlement with the Scandinavian countries during the war has had to be made or offered largely in the form of gold, on account of the small amount of the securities of these countries held by the Allies. Owing to surfeit of gold, and also to their desire to obtain certain commodities from the Allies, the Scandinavian countries have repeatedly permitted exchange rates to fall rather than take gold from the Allies. Large sums have been continually accruing during the war in favour of Scandinavian

shipowners, who have carried for the Allies enormous freights at heavy rates.

The further depreciation in several of the neutral exchanges towards the end of the third year of war is partly to be accounted for by the tightening of the blockade around the Central Powers. This closer blockade led to a considerable reduction in the volume of goods imported by the surrounding neutral countries, especially in the volume of goods imported from America, and is therefore bound to have exercised some influence on neutral exchange rates on London.

In the following table we show the premium or discount, as the case may be (based on the par rate), of the principal exchanges on London at the end of the third year of war—

Country or Place.	Mean Rate Cur- rent on 3rd August, 1917.	Par as usually quoted.	Premium (+). Discount (-).
			%
Paris	27·41 $\frac{1}{2}$	25·22 $\frac{1}{2}$ francs to £1	+ 8·7
Petrograd	219 $\frac{1}{2}$	94·57 roubles to £10	+ 132·1
Italy	34·43	25·22 $\frac{1}{2}$ lire to £1	+ 36·5
New York	4·76 $\frac{7}{8}$	4·86 $\frac{3}{4}$ dollars to £1	- 2·0
Madrid	20·76 $\frac{1}{2}$	25·22 $\frac{1}{2}$ pesetas to £1	- 17·7
Switzerland	21·40	25·22 $\frac{1}{2}$ francs to £1	- 15·1
Amsterdam	11·29 $\frac{1}{2}$	12·107 florins to £1	- 6·7
Copenhagen	15·95	18·159 kroner to £1	- 12·1
Christiania	15·55	18·159 „ to £1	- 14·3
Stockholm	14·10	18·159 „ to £1	- 22·3

To what extent the adverse movements which have occurred in some of the neutral exchanges on London during the war may have been due to an increase in the indebtedness of Great Britain or of Great Britain's Allies to those countries, it is not possible to state with any degree of certainty. In connection with Great Britain's payments on behalf of her Allies, the Chancellor of the Exchequer made the following interesting statement in the House of Commons on Tuesday, 24th July, 1917—

From the beginning this country has borne the whole of the expense of supplies to all the Allied countries which were produced in the United Kingdom. Up to the time of the entry of America into the war, we also bore in the case of some of the Allies the whole of the expenditure outside their own country, and in the case of all of them some portion of the expenditure out of their own country.

Finally, in concluding this section on the Foreign Exchanges, brief reference might be made to certain exchanges on Germany. In the following table we show the rates of exchange of four neutral countries on Germany at the end of the third year of war—

NEUTRAL RATES OF EXCHANGE ON GERMANY

	<i>Amsterdam.</i>	<i>Switzerland.</i>	<i>Copenhagen.</i>	<i>Stockholm.</i>
	Florins to 100 Marks.	Francs to 100 Marks.	Kroner to 100 Marks.	Kroner to 100 Marks.
Par level. . . .	59.26	123.45	88.88	88.88
At 2nd August, 1917	33.60	63.40	47.00	42.75
Discount on Par .	43.30	48.64	47.12	51.90

It will be observed that the figures show considerable depreciation in the exchange value of the Mark in the four-named countries. We may point out that a depreciated exchange in war time does not necessarily indicate that the internal financial and economic conditions of a country with such an exchange are bad. We cannot support, without qualifications, the contention of many writers that the more or less continuous fall in the value of the German Mark in neutral countries points to the economic collapse of Germany in the near future. What can be stated with certainty is that in neutral countries there are more sellers than buyers of German promises to pay at some future time.

II. THE FOREIGN EXCHANGES OF EUROPE AND THE UNITED STATES

(Contributed by Mr. E. L. Franklin)

The third year of war has passed, and the expected has again happened. The Allied exchanges have remained favourable to London, the neutral exchanges have become more adverse, and the enemy exchanges have further depreciated—and for the same reasons.

We are still supplying our Allies with vast quantities of war material, and our purchases from neutral countries have had to be made at greatly enhanced prices.

The London Exchange Committee are still successful in maintaining the steadiness of the American and Dutch exchanges, and

the French and Russian Governments are still endeavouring to keep the value of their currencies within reasonable bounds, with more or less success.

There have been, however, two new features: one, and that by far the most important, is the entry of America into the war as an Ally; and the second, the attempt by the Italian Government to control their exchanges by means of credits obtained in London after the manner of those arranged by France and Russia.

America has not only made huge advances to this country amounting already to £120,000,000, but has also relieved us to a very great extent of the heavy burden that we had assumed of financing our other Allies; and for the last three months we have been in a position to concentrate our efforts more on our own requirements, and thus our task of maintaining the American exchange has become a comparatively light one—at any rate, a possible one.

The following table shows the rise or fall in the value of the pound sterling in foreign European countries between July, 1916, and 30th June, 1917—

In France—a fall of $2\frac{1}{2}\%$	{ Exchange controlled by France through credits obtained in England.
In Russia—a rise of 40%	{ Exchange assisted by Russia by means of credits obtained in England.
In Italy—a rise of 14%	{ Exchange recently assisted by Italy through credits obtained in England.
In Holland—a rise of $\frac{3}{4}\%$	{ Exchange controlled by England.
In Spain—a fall of 13%	{ Uncontrolled, but gold is being sent from America provided indirectly by England.
In Switzerland—a fall of $10\frac{1}{2}\%$	
In Sweden—a fall of $4\frac{1}{2}\%$	
In Denmark—a fall of $\frac{1}{2}\%$	
In Norway—a fall of 1%	
In Germany—a rise of 30%	{ These calculations are made through Holland.
In Austria—a rise of 40%	

If one compares these rates with those current before the war, the movements are much more pronounced.

The following table shows the value of the pound sterling in these countries on 30th June, 1914, and on 30th June, 1917; and also gives the amounts of gold held by foreign State banks, as well as their Note issues, on both these dates,

	30th June, 1914.	30th June, 1917.	Gold Millions. 30th June, 1914.	Gold Millions. 30th June, 1917.	NOTES.	
					30th June, 1914.	30th June, 1917.
France. . .	Frcs. 25.15	27.40	162	211	242	793
Russia . . .	Rbls. 9.5	21.7	159	147	163	1,258
Italy . . .	Lire 25.25	34.45	49	41	62	164
Holland . . .	Fls. 12.125	11.56	13	50	25	61
Spain . . .	Ptas. 26.80	20.30	21	63	75	100
Switzerland . . .	Fcs. 25.20	22.60	7	13.5	10	20
Sweden . . .	Kr. 18.25	15.58	6	11	12	24
Denmark . . .	„ 18.25	16.27	4	11	8.5	17
Norway . . .	„ 18.25	16.14	2.7	7	6	15
Germany . . .	Mks. 20.50	34.10	65	123 ¹	120	435 ²
Austria . . .	Kr. 24.16	51.60	52	Not publshd.	86	Not publshd.
England . . .			40	57.5 ⁴	30	39.5 ³

Although the Allied countries in the above list have parted with at least *some* of their gold reserves for the purpose of protecting their exchanges, it was only at the end of June of this year that Germany followed their example by sending close on £4,000,000 to neutral countries, chiefly to Holland. Although this action had an immediate and favourable effect on the value of the Mark, it was too late to be of any permanent use, and a further depreciation has set in.

The great and growing amounts of paper money circulating in all belligerent countries (with the exception, of course, of America) is evidence enough to show that all the belligerents will find it excessively difficult to restore their exchanges to normal after the war.

As to this country, as we shall have parted with a large portion of our pre-war foreign investments and as our mercantile fleet will have been very materially reduced, "our invisible exports" will have greatly diminished, and our capacity to re-establish rapidly the value of the pound sterling in neutral countries will depend greatly on the ability of our Allies to pay us interest due to us on the large advances that we have made to them. We must bear

¹ It is reasonable to suppose that in this amount of £123,000,000 is included the gold formerly belonging to the Austrian State Bank.

² In addition to this, there are in circulation, in Germany, about £125,000,000 in Loan Bank notes.

³ This is, of course, exclusive of about £163,000,000 Treasury Notes and Certificates.

⁴ Exclusive of £18,500,000 held against Treasury Notes.

in mind, however, that we are the one European country with a large and regular gold income (derived from our African and Australian dominions), and this, combined with a stricter economy than has been our habit, and a continuation of the present scale of industrial output, may enable us to overcome our difficulties sooner than one might expect.

Our fiduciary currency is not unwieldy, certainly not so compared with that of other countries.

With the other belligerents (I am always excepting America) the difficulties are far greater; and, although it is to be hoped that other and less drastic means may be discovered, it may become necessary in the case of some countries to readjust the ratio between their gold and their currencies, based more or less on the present rates of their exchanges.

Thus, the gold ten-rouble piece might be re-minted into a new coin of the same weight, but stamped 20 roubles; the Austrian 20-kronen piece might be treated in the same way and stamped "40 crowns"; while the German 20-mark piece might be reduced in weight by one-third.

It is conceivable that it might be necessary also to reduce the gold in a 20-franc and 20-lire pieces; but the recuperative power of France and Italy has always proved itself to be so great, that in their case this is hardly likely to be necessary.

Even were these drastic measures carried out, I can see but little prospect of any European belligerent country, excepting England, being in a position to resume specie payment for many years to come.

In consequence of the rigid restrictions that our Government has placed upon all exports and imports that are not deemed to be of primary necessity, the volume of our trade cannot be said to have been affected in any way by appreciation or depreciation in exchange.

The volume and direction of our exports and imports has a great effect on exchange rates—not *vice-versâ*.

SPAIN

Of all neutral countries in Europe, Spain has suffered the least amount of interference in its foreign trade. Not only is its geographical position a very advantageous one, inasmuch as it is

remote from the war zone, but it can carry on a large and highly profitable trade with France and England without having to have recourse to the risks of a long sea transit. As both countries are in great need of Spanish products, both raw and manufactured, quite regardless of cost, the balance of trade has been in its favour to an extraordinary degree.

The result of this is most striking—Spain from being a country whose exchange was quite a negligible quantity, may now be said to have taken the leading position in Europe as a creditor nation. Its gold reserves, which immediately before the war stood at the comparatively modest figure of £21,000,000, have now reached the great total of £63,000,000, and are still mounting, in spite of all the risks and difficulties of transit.

As Spain has maintained its buying price for gold until after the end of June this year (it is true that it has quite recently reduced its price by 5 per cent.), it would, I think, be reasonable to regard its exchange as that on which to base those of other countries.

With that object in view, I have prepared the following table, which shows the percentage of appreciation that has taken place in the value of the Spanish peseta since the commencement of the war in all leading countries—neutral as well as belligerent—

In Sweden	the rise has been	10 %
„ Norway	„ „	16 %
„ Denmark	„ „	17 %
„ Switzerland	„ „	18 %
„ Holland	„ „	26 %
„ United States	„ „	28 %
„ England	„ „	32½ %
„ France	„ „	56 %
„ Italy	„ „	81 %
„ Germany	„ „	106½ %
„ Austria	„ „	176 %
„ Russia	„ „	200 %

III. THE PRESENT AND FUTURE EFFECTS OF THE WAR ON THE EXCHANGES OF (A) BELLIGERENTS, AND (B) NEUTRAL COUNTRIES

(Contributed by Mr. W. F. Spalding)

An examination of the present effect of war on the exchanges of the belligerent countries reveals some curious features. At the

moment of writing, middle of July, 1917, the pound sterling in Holland is quoted at 4·76 per cent. discount; in the same country the German Mark is worth only about half as much as it was in pre-war times—it stood at a discount of no less than 41·68 per cent. when these lines were written, and has since fallen still lower. On the other hand, we have the French franc, the Italian lire, and the Russian rouble all quoted at punishing rates of discount on the market of an allied nation—Great Britain. To put it another way, on each of the foreign centres in question a much larger number of francs, lire, and roubles than normally is being surrendered in exchange for the pound sterling. Their currency has depreciated even on the bourses of their Allies. At the same time, we find on the bourse of the latest belligerent of importance, New York, that sterling, francs, roubles, and lire have all declined in value, some more than others, Great Britain's currency, thanks to the efficient measures taken to maintain its exchange value, revealing less depreciation than that of any of the other countries.

In neutral centres we have the exchanges continually moving against Great Britain, France, Italy, and Russia; now and again there is an improvement, but it never lasts for long; and so used to these adverse quotations have dealers become, that they are familiarly spoken of as at the war level, and few trouble to endeavour to realise the actual fact that the respective currencies have depreciated on the markets of other countries.

In the case of Germany, the depreciation has been, however, much more severe and marked. Desperate remedies have been tried, for a while by the Central Powers collectively; but, in the course of time, Austria seems to have dropped out of the running and Germany to have shouldered the burden. Her efforts, whatever they are or were, appear to have been of little avail, for, with the exception of a few spasmodic and sporadic improvements, the exchange value of her currency has constantly and continuously declined on all the neutral markets to which she has access. Now, after all other expedients, such as the mobilisation or requisitioning of all securities negotiable in other countries, have failed, she has taken the desperate step of demonetizing or replacing the 2-Mark silver piece by paper. With the silver thus obtained, she may possibly be able to effect a temporary improvement by sending the metal to neutral countries, but the demoralisation is

widespread ; and already Germany's Swiss creditors are said to be selling their holdings of her paper—at considerable sacrifices in price, it is reported.

The rot in Austrian currency is best seen from the quotation in Switzerland: the mid-July (1917) price for 100 Austrian kroner was 42 francs—approximately 60 per cent. discount! In Amsterdam the krone is worth even less—twenty Dutch florins will buy 100 of the Austrian coin.

In Germany's case, as with all the other belligerents, a certain amount of the depreciation is due to sentimental influences, for, curious as it is, the exchange value of their currencies waxes and wanes pretty regularly with the varying phases of the war, but the principal reasons for the heavy decline in the value of the Mark are to be found in the almost complete cessation of Germany's foreign trade; her exclusion from all but the markets of her immediate neighbours has had dire results. The amount of Germany's commodities required by Holland and the few other European countries with which she is still in touch is, in comparison with what she requires from them, infinitesimal, and in the circumstances it amounts to all paying and no receiving; a state of affairs which has its inevitable effect, whatever the financial resources of the country be, although we must admit that Germany has managed those financial resources as regards exchange uncommonly well.

Then there is inflation, apart from the various war loan issues, the Treasury bills sales and so on. Germany has worked the printing press hard, and, according to the latest report I have in my hands, she has issued notes to the approximate value of £435,855,000, against which she holds, according to her own showing, gold £122,873,000—a much lower ratio than formerly. With all countries, I leave out of account, in speaking of note issues, paper assets, securities, and the like, held against them.

Now take Russia: the stoppage in her trade is obviously very serious; her exports of grain, provisions, raw materials, and semi-manufactured products of agriculture have been terribly restricted by the closing of the Dardanelles, and the cessation of trade with Germany and other countries *viâ* the Baltic ports and the railways over the West frontier. With the cutting down of trade, the

demand for Russian currency has been sharply curtailed; while, on the other hand, with Russia needing increased quantities of foreign commodities, the demand for foreign currency has correspondingly increased. Then, too, as the war progressed, the inflation of currency in Russia has been enormous: the Imperial Bank of Russia held quite recently gold to the value of £148,271,000; her note issue at the same time was equivalent to £1,217,574,000. Her exchange difficulties have not been rendered easier by the way in which she has played into the hands of speculators by allowing her notes to circulate beyond the confines of her own land. Rouble notes are to be found circulating all over Europe and China; they have also been drifting around India and Persia, and many other places in the Far East, and are continually coming back to Europe in quantities large enough to cause serious embarrassment to the exchange: to put it mildly, Russia never knows where she is in the matter of her currency.

France and Italy have large supplies of paper currency: £808,188,000 in the one case, £166,180,000 in the other; while Great Britain has also, according to the Currency Notes' Return of 18th July, 1917, £166,764,703 in circulation: and all of them continue to finance the war by means of Treasury bills, etc.—each, in its turn, adding to the inflation of the currency in the respective countries. The point to note in each case is the increasing volume of currency, and I still rank among the heretics who maintain that you cannot increase the volume of a thing without decreasing its value. The best method of stabilising the exchanges is to decrease the issue or circulation of paper—not to increase it. You may say, there is much more work for the currency to do to-day, hence the necessity for the increase. My reply to that is, that any such increase of work is compensated for by an increased velocity of circulation. There may be more work for the currency to do, but the money changes hands so much more quickly than in ordinary times—a fact which is proved by the heavy figures of the Clearing House Returns, especially when it is considered that these figures are not now swollen by the Stock Exchange transactions which formerly took place.

This brings us to the future effects of the war on the exchanges, and here I would say that, unless some check is given to the ever-increasing volume of currency, to say nothing of the inflation,

the exchanges of the belligerent countries must and will depreciate still further. It is a vast problem, which it will be extremely difficult for all the belligerents to handle after the war. In the case of Great Britain, however, it is to be assumed that the depreciation will be considerably offset as and when the vast sums she has lent to her Allies are repaid. At the time of writing, the Allies are indebted to us to the extent of £1,025,000,000, and loans to the Dominions amount to £146,000,000. Whatever the terms of repayment are, there will be no actual repayment of the principal for some years after peace is made. Under favourable circumstances, some of the financially stronger Allies may begin later to establish a sinking fund, but that will be a number of years ahead. This view is based on the financial position of these countries as known and estimated. There remains the question of interest payments—if any. It is certain that the effect of interest payments will be a continually recurring element of strength to the exchange between London and the nations which have to pay the interest. Interest payments are a liability of the borrowing nations, and as far as the exchanges with this country are concerned, if arrangements have been made for interest, exchange will be influenced in our favour.

Each repayment of the principal sums will exercise a similar influence. Both the interest payments and the repayments of the capital sums will affect the exchanges in the same way as exports. The reverse effect will be seen on the exchanges of those countries like France and Italy, which have borrowed heavily from Great Britain: I should expect to see a long period of adverse rates against them.

In this respect, perhaps I should say, in a very minor degree, Germany is similarly placed—at any rate as far as Austria and some of the Near Eastern countries are concerned. Undoubtedly they are all heavily indebted to her, but whether they will be able to pay back any appreciable amounts to make much difference to the exchanges between Berlin and other centres is a moot point. It should be borne in mind, too, that the exchanges of the countries to whom she has loaned funds are relatively of much less importance than are those to which Great Britain has advanced funds. I understand, too, that Germany realised credits in South America in order to help her exchange with U.S.A. To

the extent this has happened, her post-war position in exchange will be weakened.

There remains the question of the neutral exchanges. In most neutral countries there has been a certain amount of inflation directly as the outcome of the war, though, of course, in nothing like the same degree as in the countries of the belligerents; but a strong "bull" point for them is, that exchanges in many cases are heavily in their favour: sterling, francs, Marks, etc., are not much in demand, since all the nations in question have more to pay than to receive from the neutrals, added to which trade with those countries is very restricted at the present time and has fallen off in many directions. This in a large measure may be expected to right itself, slowly it is true, after the war, in proportion to the normalising of trade again. So long as present conditions continue, however, there are many centres upon which Great Britain and her Allies must indent heavily for supplies; and unless the value of British imports can be very considerably restricted, which seems doubtful at present, we must expect to see the exchanges of the neutrals appreciate and those of the belligerents depreciate correspondingly. Neutral nations, too, are becoming somewhat alarmed at the growing war expenditure of the belligerents, and this in some respects is reflected in the rates at which they quote the exchanges.

These movements in exchange will, in the future, have an effect on imports and exports, though the effects at the moment are obscured by reason of the legislative interference with trade in all directions. As far as Great Britain is concerned, we may expect to see an increase in the exports to the countries whose exchange is adverse to her; and although the process may be gradual with the removal of the adverse balance of trade, the exchanges will tend to turn in favour of London.

With regard to imports, it is, as we have stated, purely a question of how the population can refrain from the consumption of various articles and produce, and so cut down or keep within lower limits our imports. There is one point which I would again emphasize: trade is now, and it will probably continue so for some time after the war, carried on without much regard to exchange. That is to say, if, for example, in Holland, the pound sterling will fetch, say, only 11 fl. 50 c. as against a normal of 12 fl. 10 c., then

merchants and traders base their operations accordingly, or, as perhaps I should say, work out the selling price of their shipments to bring in the required number of florins to make it worth while to ship. In some circumstances, qualities, grade, and so on, could, of course, be cut down to bring the cost within the necessary limit. But, obviously this state of affairs militates against exports if for any reason the foreign importer raises objections on the score of quality, price, etc., and in that case he may seek to fill his needs from other markets—result, loss of trade to the other country. It has been argued, however, that adverse exchange tends to work out its own salvation—for this reason: its influence is to stimulate exports and to discourage imports. For instance, if the exports are from this country to a foreign centre, they may be paid for with a smaller amount of the currency of that centre: the foreigners buy relatively cheap; but as adverse exchange increases the cost to us of everything we get or import from the foreign centre, we buy relatively dear.

This question of appreciation and depreciation in exchange seems to work both ways in its effect on imports and exports. The country with the adverse exchange endeavours to make more shipments to the country whose exchange is against it for the purpose of working off the depreciation; while the country with the favourable exchange seeks to send more goods, commodities, etc., for the purpose of securing the higher return. Take Holland again, if it has to send only 11 fl. 50 c. worth of goods to obtain £1, where before it would have had to send over 12 florins' worth to procure £1 of our currency, plainly an attempt will be made to increase shipments. Just now, however, as we have seen, everything is upset by trade restrictions, so much so, in fact, that the movements in the exchanges appear to have little effect on trade one way or the other. Then there is the shortage of tonnage, the consequences of which are far-reaching.

The gold corrective to the exchange seems to have been dropped for many months by all the belligerents, though there are indications that this method of levelling down the adverse exchanges is now being attempted again in various directions. The whole position, however, is artificial, and it is useless to discuss it.

A word remains to be said concerning the silver exchanges. Silver, largely as the result of the keen demand for increased coinage

from practically all countries, has appreciated rapidly in value, and with the rise the China exchanges have moved up, too. With every upward movement in silver the value of the Hong-Kong dollar and the Shanghai tael has increased: that means that exchange has turned against London, for we have to surrender so many more shillings and pence for each dollar or tael, as the case may be. The appreciation in China currency largely takes the form of a scarcity value: China, to take advantage of the fancy prices being paid for silver, has shipped large quantities to Europe and elsewhere, and, as a result, has, to a certain extent, denuded her country of currency she badly needs: plainly, this smacks of a contraction in the currency, the outcome of which is seen in a more valuable dollar and tael.

As regards the curious phenomenon noticed lately of the China exchanges moving upward while silver is shedding fractions daily, that is the result of interference with the laws of supply and demand: the theory of the silver exchanges has not been disproved any more than that of the gold exchanges. The market for bar silver, etc., for the time being, is a controlled one, hence the ordinary factors are interfered with.

Indian exchange is in a peculiar position. Between Bombay, Calcutta, and London the rate remains at 1s. $4\frac{7}{8}$ d. to the rupee for telegraphic transfers; but, as it happens, that quotation has little relation to the actual state of affairs. The exchange banks are apparently precluded from doing business at anything over that rate, notwithstanding the keen demand for finance; in fact, practically all their operations are confined to the financing of Indian exports of national importance. The allotment of Council remittances, the principal avenue through which banks formerly obtained rupees in India, was recently cut down to Rs. 120 lakhs a week—not enough to go round—and it is announced that the allotment is shortly to be still further reduced to Rs. 90 lakhs. In the circumstances, it becomes extraordinarily difficult to lay down rupees in India, since the sales of the universal provider—the Government—are limited, and banks are, therefore, obliged to restrict their commitments. They do not care to do the business without cover, and of cover there is little to be had. What it amounts to, then, is this: with the balance of trade heavily in favour of India, large quantities of merchandise require to be

financed; but in default of being able to find the rupees, exchange dealers are compelled to limit their purchases of mercantile bills in India, hence the present difficult situation, which seems to call for careful handling. The position is not rendered easier by the appreciation in silver, although we notice that question is being tackled by the prohibition of the melting down of rupees in India. Actually the rupee is now worth much more than 1s. 4d., but is kept within its present limit by Government control.

SECTION E

THE TRADE BANK OR CORPORATION

On 22nd September, 1916, an important report was issued of a Committee appointed by the Board of Trade to consider desirable means of meeting the needs of British firms after the war as regards financial facilities for trade, particularly with reference to the financing of large overseas contracts. Some time previously to the appointment of this Committee, of which Lord Faringdon was chairman, the President of the Board of Trade had expressed a personal opinion in the House of Commons that English banking had not been sufficiently adventurous in the past, and might with advantage be more enterprising in the future. This charge was combated by several leading bankers at ensuing annual bank meetings. The Board of Trade later appointed a committee of bankers and business men to consider and report on the lines above indicated. The report, from which we quote the following paragraphs verbatim, attracted considerable attention and some unfavourable criticism.

“ In view of statements made by witnesses, it is desirable that we should state clearly our definitions of banking facilities in the British sense, and of what we would call by the wider name of financial facilities. The former are properly limited to those which can be provided without a lock-up such as would impair the liquidity of funds and deposits at call and short notice. For this reason, the usual practice of bankers here is to confine their advances as a rule to a currency not exceeding a few months. By financial facilities we mean, generally speaking, those which would involve a longer currency than this.

' A careful study of the evidence above referred to, and our own knowledge of banking arrangements and facilities, lead us to the conclusion that there exists to a considerable extent at the present time in this country the machinery and facilities for the finance alike of home trade and of large overseas contracts, and for carrying through much of the business which has been done by foreign banks. The British banks afford, we believe, liberal accommodation to the home producer. British bankers are not shy in making advances on the strength of their customers' known ability and integrity, and the charges for accommodation are, we believe, often lower than the corresponding charges in foreign countries. Similarly, the Colonial banks and British-foreign banks and banking houses, render immense assistance to British trade abroad; and certainly in the Far East, and in many parts of South America British banking facilities do not fall short of those of any other nation. We find also that in the case of large contract operations British contractors, with the assistance of financial houses, have in the past been ready to provide large amounts of capital and to take considerable risks in connection with the operations which they have undertaken.

" Our arrangements, however, are faulty in our not co-ordinating many of the facilities mentioned in the previous paragraph. We recognise also that the British manufacturer may be frequently in want of finance of a kind which a British joint stock bank with liabilities as above described could not prudently provide; whereas the German banks in particular seem to have been able to afford special assistance at the inception of undertakings of the most varied description, and to have laid themselves out for stimulating their promotion and for carrying them through to a successful completion. We conclude, therefore, that there is ample room for an Institution which, while not interfering unduly with the ordinary business done by the British joint stock banks, by Colonial banks, and by British-foreign banks and banking houses, would be able to assist British interests in a manner that is not possible under existing conditions.

" Such an Institution could also take a leading part in the inception of transactions and assist in connection with the machinery of overseas business. In the case of German manufacturers, it frequently happens that on the board of the

manufacturing company there is a representative of a bank, and there seems little doubt from an examination of the information which is available that the German banks have exercised an amount of control over the manufacturing concerns in which they are interested, which would not be possible, even if it were desirable, in the United Kingdom. A large number of our manufacturing undertakings are wealthy concerns, and would not tolerate for one moment interference by bankers in their affairs, and, indeed, would probably resent an inquiry into the nature of their business arrangements. Such manufacturing concerns, however, do require assistance when they transact overseas business.

“Foreign banks have, in most of their operations, adopted the course of forming syndicates to undertake any business of considerable magnitude. They have headed such syndicates and they have taken the labouring oar in connection with investigations. The members of the syndicate have generally included other banks, and associated with them have been those who were particularly interested in the class of business proposed to be done. These syndicates are formed after the first superficial enquiry has satisfied the banks that there is apparently a good business to be done. Directly this point is reached, the expenditure in connection with thorough investigation is on account of the syndicate. If the business is ultimately proceeded with, the profits or losses on the wind-up of the business are shared *pro rata* after allowance to the bank for management. Some such procedure should be followed here. It would enable the Institution to undertake business of a comprehensive character, and its imprimatur would have value when issues were made to the public.

“It is desirable that the Institution, without coming under Government control, should receive as much official recognition as possible.

“Having assured ourselves that the creation of an Institution of the character referred to above would not unduly interfere with existing banks, banking houses, or financial institutions, we recommend the formation of a new bank to fill the gap between the home banks and the Colonial and British-foreign banks and banking houses, and to develop facilities not provided by the present system.

“The bank should be called the ‘British Trade Bank,’ and

should be constituted under Royal Charter. Its features should be as follows—

“(1) It should have a capital of £10,000,000. The first issue should be from £2,500,000 to £5,000,000, upon which, in the first instance, only a small amount should be paid up, but which should all be called up within a reasonable time. A further issue should be made afterwards, if possible, at a premium.

“(2) It should not accept deposits at call or short notice.

“(3) It should only open current accounts for parties who are proposing to make use of the overseas facilities which it would afford.

“(4) It should have a foreign exchange department where special facilities might be afforded for dealing with bills in foreign currency.

“(5) It should open a credit department for the issue of credits to parties at home and abroad.”

The pith of the report appeared to be that the Faringdon Committee came to three main conclusions, namely: (1) that it would not be prudent for the present British banks to make advances for periods exceeding a few months, because the major part of their deposits are accepted repayable at call or short notice; (2) that the German bank practice of granting credit for longer periods than granted by the British banks, and of taking a direct share in manufacturing undertakings, in many cases from their inception, had been of immense aid to German industry and manufactures; (3) and that, therefore, in the national interest it was desirable that a new British bank should be formed, which should not accept deposits at call or short notice, but which should make advances on principles similar to those adopted by the German banks in the conduct of their business.

Conclusion (1) raises some very important reflections. For many years the British banks have prided themselves on the supposed great liquidity of their resources. After the experience of August, 1914, when the short loan fund solidified and investments became unsaleable, two events that had been predicted by financial experts, the question arises—Has the so-called liquidity any practical value apart from the published balance sheets tending to create a feeling of confidence in the minds of depositors intelligent enough to understand a balance sheet? If all bank depositors before the war had

on the same day demanded repayment of their deposits in the form of legal tender, only from 8 to 10 per cent. of the total amount could have been so repaid, this percentage representing the total legal tender reserves of the joint stock banks in hand or at the Bank of England. Obviously, the currency of advances and loans, whether averaging only three months, or twelve months or two years, would have no bearing on the legal tender liquidity demanded on a day of supposed wholesale withdrawals by depositors.

It is now generally recognised that if any individual bank experiences a continuous drain on its legal tender reserves, other banks must necessarily come to its assistance; otherwise, if it had to suspend payment on account of insufficient supplies of legal tender, and notwithstanding that it was perfectly solvent, given reasonable time to realise its assets, a run would be precipitated on other banks and a general crisis ensue.

A point of far greater importance than so-called liquidity is the real character of the advances. The true function of the modern bank is to finance produce and raw materials through the various stages of production and manufacture and transport, from the raw material to the ultimate consumer. The banker may be looked upon as paying on behalf of the producer or manufacturer a large proportion of the wages and other charges that have necessarily to be paid before articles are finally ready for consumption and sold, and, later, receiving reimbursement, plus customary interest charges, out of the proceeds of sales, the trader taking all risk of any ultimate loss. A banker is also justified in making reasonable advances on works of a productive or transport character in the course of construction, provided he is to be repaid soon after completion; and also for extension or improvement of existing plant leading to increased productive power, provided the loans are not to be of long standing. Advances of the latter type ought to be repaid out of the first profits derived from the increased production. But a banker's duties do not include making advances on fixed capital account, however well secured such advances might be. It is the function of partners and shareholders in manufacturing concerns and other businesses to provide all necessary fixed capital.

Finance and trade are now so interwoven, that it is a truism to say that the more the banks finance the development of trade

and increase productive power, the greater will be the ultimate rewards to the profession of banking itself.

There does not appear to be any legitimate reason why British banks should decline to entertain applications for advances required for periods exceeding six months and up to two years, provided such advances bear a reasonable proportion to the total resources of the banks and are devoted to approved productive or transport purposes.

Present deposits in British banks being individually, though not collectively, withdrawable at call or short notice, some reservation might be printed in all pass-books to the effect that the banks reserve the right of demanding at any time, if authorised by the Treasury, one month's notice before withdrawal from current accounts of any sums exceeding some stated amount in the form of legal tender, as is sometimes done in the case of deposit receipts.¹ It must be made obvious to depositors that they cannot collectively have the whole of their deposits always awaiting them in the

¹ On this point, Mr. Sykes presents a Minority Report. He writes: "I wish to dissociate myself from the recommendation of the Committee that the banks should print in their pass-books a notice reserving the right to demand one month's notice, if authorised by the Treasury, before paying more than a stated sum in legal tender to those customers who have current account balances with them.

"I consider such a step would be likely to have a deplorable effect upon the credit of our banks, especially in other countries. Moreover, it would be useless, for surely the Treasury would not consent to such a step except in such a grave national emergency as would justify and compel the issue of an emergency legal tender.

"With regard to the statement that 'it must be made obvious to depositors that they cannot collectively have the whole of their deposits always waiting them in the form of legal tender, and yet be receiving interest,' I would like to point out that the practice of allowing interest on bank current accounts is only local, and that a very simple method of making the desired fact obvious to the public is for the banks concerned to follow the general rule and decline to allow interest on accounts which are subject to withdrawal by cheque,"

form of legal tender, and yet be receiving interest. A banker must make advances or investments of some character to earn the interest he pays to depositors. The possibility, though improbability, of sudden and heavy withdrawals by depositors being ever present in the minds of bankers, apart from the suggested reservation as to possible notice before withdrawal being required under certain conditions, there might be stored by the Government large reserves of legal tender notes in various denominations to be supplied to the banks in times of crises. The mere knowledge of the availability of these stocks for times of crises would give confidence not only to bankers, but to the business community in general.

In making comparisons between the German and British banking systems, it has always to be remembered that German trade and the German banking system developed considerably later than British trade and the British banking system, and the later development of the former probably accounts for its greater adaptability to modern requirements. The German system is not faultless, nor is the British: both have their respective merits for their different periods of development. But the German banking system, with its tentacles stretching into every important trade, particularly those of a developmental character, has much for commendation from a national standpoint. To it has been largely due the extraordinary development of the trade, manufactures, and business of Germany in recent years.

In order to give a banker's views of the present day responsibilities and functions of banks, we quote the following extracts from an address delivered before the Institute of Bankers on 8th November, 1916, by its late President, Mr. Pownall—

“At the present time the principles upon which the British system of banking is based, and the management of the great English banks are alike criticised by some persons in authority and by others, because the banks do not indulge in what has been called ‘adventurous’ banking. That is to say, they do not become merchant adventurers, promoters, contractors, participants in financial, commercial, industrial, or other development undertakings.

“In England bankers are not traders; and it is not part of their business to become partners in any trading enterprises, either home or foreign. In Germany the financier is the master

of the commercial and the trading world. He endeavours to group certain industries into single great combines, and he provides for the permanence of his mastery by the right of representation on the board of the combine. One result is the gradual ousting of small enterprises.

"The English banker is not a trader: he is a temporary lender of credit. On the other hand, the so-called German banks (for instance, the Deutsche Bank) are to a great extent controllers and shareholders in industrial concerns, and their solidity depends on the continued prosperity of the special industries with which they are identified.

"Development companies skilfully handled may introduce much new and good business in England, and if (like the German banks) they once get a deserved reputation for the soundness of the ventures they introduce, they may with fair readiness place the shares of the companies they initiate on the English market.

"If we are to form a company or companies to introduce new foreign business, the company must be able, like the German banks, to find investors to take the shares of the concerns it recommends. For everyone's sake, we ought to recognise the distinction between the banker and the merchant. English internal banking works on exceedingly fine lines, and for it to finance business by means of 6, 12, 18, 24, or even 36 months' bills on firms or companies outside the jurisdiction is not within its scope.

"Our banking is a vast system of credit resting on a liability to repay in legal tender. The cardinal fact is that repayment is due on demand or at very short notice.

"Adventurous banking, and by that, I understand, the investment either at home or abroad for fairly long periods or for permanent purposes of money which is liable to be repaid at call or at short notice, is not banking."

The foregoing views are, as already stated, the views of a practical English banker. But whatever may have been the character of British banking in the past, the question to be answered is: "Are there any real reasons why British banks should not henceforth be directly connected with manufacturing interests?" Banks are dependent on the activity of trade for their profits, and trade is largely dependent on banks for credit. What is more natural than that there should be some amalgamation of mutual interests.

But if additional credit facilities are to be provided, it behoves British traders and manufacturers to wake up to the needs of their foreign customers, and generally to be more enterprising and to give greater attention to improvements and developments.

In any case, the fact that the present British and German banking systems differ in the extent and kind of their operations is no reason why a system of companies should not henceforth be formed in England with the express object of supporting and extending the trade and manufactures of Great Britain and the Dominions. Institutions capable of examining new projects and of extending credit where needed would prove valuable from a national standpoint. Very gradually the existing British banks may, in the course of time, embrace some of the new functions in the same way as they have in recent years opened savings bank, foreign exchange, and trustee and executorship departments.

The report of the Faringdon Committee appeared, as already stated, on Friday, 22nd September, 1916. Eight months later, namely, on Tuesday, 15th May, 1917, and arising out of the recommendations contained in the report, there was published as a White Paper the full text of a Royal Charter granted to a new institution to be formed and called the British Trade Corporation, and also of the Deed of Settlement. The main purpose of the Corporation is declared to be "to afford advice and financial assistance to British commercial and industrial undertakings, and generally to further the development of British trade, industry, and commerce." It will be observed that the new institution does not use the word "bank" in its title. This omission was intentional, in order that its sphere of activities might not be confounded with the ordinary operations of the purely British banks. The new institution is, in fact, intended to be an evolutionary offshoot of the present banking system, a number of the larger banks, according to a statement made by the President of the Board of Trade on 17th May, having subscribed to its capital. By the terms of the Charter, the Corporation has full powers to carry on business both as bankers and traders on their own account. The authorised capital is £10,000,000, in shares of £10 each; and the Corporation may commence business as soon as capital to the amount of £1,000,000 has been subscribed and £250,000 paid up. It is very obvious that as the operations of the Corporation extend,

there will have to be considerable enlargement of capital: £10,000,000 will not go far in foreign operations and contracts. Full powers are conferred upon the Corporation in the matter of underwriting and in taking part in the promotion of new undertakings. Provision is made in the Deed of Settlement for the directors and managers of the Corporation receiving a substantial share of the profits, after shareholders have received certain fixed percentages. This profit-sharing provision and the general trading powers conferred on the Corporation occasioned considerable criticism at the time of the publication of the Charter and the Deed of Settlement, and a hostile discussion was raised in the House of Commons on Thursday, 17th May. Serious objection, too, was taken to the fact that the Chairman of the Committee becomes Chairman of the Corporation which the Committee recommended; while some of his colleagues on the Committee become his colleagues on the Corporation, thus exchanging an honorary for a paid appointment. This was considered to create a very undesirable precedent. So far as the general trading powers are concerned, it is obvious that the new Corporation must have some such powers if it is to take a share-interest in developmental enterprises it is supporting, and in which some kind of proprietary interest must at times be advisable. Lack of some control or representation in the management of developmental work would assuredly make the Corporation unwilling to make advances for long periods during the constructive stage.

In an endeavour to meet the hostile criticism, the Government issued on Wednesday, 13th June, a White Paper containing the following statements—

FORM OF DECLARATION IN REGARD TO THE CHARTER WHICH THE
BRITISH TRADE CORPORATION IS PREPARED TO GIVE UNDER ITS SEAL

The British Trade Corporation hereby declares that it has sought and accepted the Charter on the footing that according to the true intent and meaning of the Charter the following are provisions thereof, namely—

That the fundamental object for which the Charter has been granted is the giving of financial assistance to British traders and manufacturers, especially in connection with overseas trade, and that the Corporation is under an obligation to give full effect to such object, and will be accessible to the business public for the purpose of consultation and otherwise: that the Corporation is not intended to be, nor will it operate, as a competing contractor, merchant or trader, and that its enterprises shall be directed to the furtherance of its aforesaid fundamental

object: that the powers and privileges given to the Corporation by the Charter are intended to be and are the machinery by which the Corporation will effectuate its said fundamental object, and will be exercised for the purpose, as a means of, and with a view to the carrying out or furtherance of the same, or so as to enable the Corporation to deal with situations arising by reason or in consequence of such carrying out or furtherance, and that nothing in the Charter has the effect of conferring any exclusive privilege on the Corporation as regards access to Government information or of placing it in any preferential position as regards the representation of British trade or finance, or of conferring upon it the right of acting as Agent of the Government except upon appointment in each case, or of excluding the Government from selecting other agents in cases in which they see reason for so doing.

Copy of Extract from Minutes passed at Board of the Corporation on the 8th June, 1917.

RESOLVED—

That clause 135 of the Deed of Settlement shall not be acted upon until it shall first have been confirmed by a majority of the votes of shareholders in General Meeting, convened subsequently to the first issue of Capital to the public.

(Clause 135 provides for the directors and managers of the Corporation receiving a substantial share of the profits, after shareholders have received certain fixed percentages.)

The official announcement of a very definite interpretation of the limitations of the Charter has helped to meet the intentions of the promoters of the Corporation and at the same time to remove the fears of traders and manufacturers as to competition from the Corporation. As at first drafted, the scheme conveyed in many quarters the unfortunate impression of having been framed more with the view to trading as a principal function than to the financing of existing enterprises and furthering development work, the main objects of the recommendations of the Faringdon Committee. It must be admitted that a gap exists in our financial organisation for providing capital for commercial developments. It is a safer specialisation for a separate organisation to undertake such financing than for the banks to do it. The banks are doubtless wise in declining to increase their less liquid loans; but their alarm at the prospect of competition from a new and powerful rival is not surprising.

On Wednesday, 27th June, there appeared the prospectus of the British Trade Corporation. The capital is stated to be £10,000,000, divided into 1,000,000 shares of £10 each, of which 100,000 had already been subscribed and allotted at par previous to the issue

of the prospectus. Subscriptions were invited for the issue of 150,000 further shares of £10 each at par, ranking in all respects *pari passu* with the 100,000 shares already privately issued. The prospectus contained the following announcement as to the business intentions of the Corporation—

THE BRITISH TRADE CORPORATION has been incorporated by Royal Charter with a view to carrying out the recommendations of the Departmental Committee of the Board of Trade appointed "to consider the best means of meeting the needs of British firms after the War as regards financial facilities for trade."

The Corporation will specially devote its energies to the development of the Trade of the British Empire in every part of the world. It will provide financial facilities, the currency of which may extend over a longer period than is covered by the usual advances made by Bankers, and it will be prepared to assist in opening up new channels for enterprise where it is demonstrated that financial aid can be afforded without undue commercial risks.

Upon the conclusion of the War it is believed that there will be an extension of the spirit of British enterprise which will only require financial help to enable it to accomplish good work for the Empire.

The Departmental Committee above referred to gave special consideration to foreign business methods and arrived at the conclusion that much of the success achieved was due to close co-ordination of interests. The Corporation will further such co-ordination in the case of British commercial and industrial undertakings, as well as afford financial assistance for the enlargement of works and the extension of plant with a view to effecting economies in the cost of production.

There exists to-day no large British financial institution possessing an industrial department or an organisation for study and research into new ideas or inventions, which is specially equipped to examine and nurse new schemes or developments until sufficiently proved and ripe for public investment. The Corporation will make this a special feature of its business and will aim at becoming a link between British industry and the British investor. It will take a lead in the formation of Syndicates to deal with business of promise and importance, and it will associate with itself other Banking and financial Institutions which care to participate in its operations.

Mr. A. H. Gibson suggests that the leading British banks should gradually extend their operations to embrace many of the modern developments of the German banking system. He expresses a wish that banking conservatism in this country, and the present lack of special organisation, shall not force the formation of a series of special trade banks. He considers that the main question for judgment is the purposes for which advances are to be devoted, rather than the currency of the loans, subject to the proviso that

advances for periods exceeding three or four months, and up to, say, two years, shall bear a reasonable proportion to the total resources of the lending bank. Mr. Gibson lays emphasis on the fact that the so-called liquidity of bank resources (other than legal tender in hand) must, under the modern system of credit, inevitably disappear in times of general crisis, just when real liquidity is most needed.

SECTION F.

I. NATIONAL EXPENDITURE AND TAXATION

In our two previous Reports (September, 1915, and September, 1916) we dealt with the changes brought about by the war in our banking practice, our currency, and our national expenditure, taxation, and borrowing. After two years of war, each belligerent had organised his national resources on a war basis; consequently there are few important changes for us to record. In Great Britain the chief feature of the past twelve months has been the steady growth in the daily expenditure until by the beginning of June the colossal figure of £7,884,000 a day was reached. After a deplorable delay, which had the effect of encouraging extravagance among all classes, our taxation was revised and very largely increased by Mr. McKenna's two Budgets of September, 1915, and April, 1916. Although it was too late, when he came to the Exchequer, to make up entirely for the lost time, his proposals were framed with courage and sagacity, and they proved extremely productive; so that when he handed over the Treasury to Mr. Bonar Law in December, 1916, it was already clear that the estimates in his £500,000,000 Budget would be largely exceeded. As a matter of fact, the total revenue for the financial year 1916-17 reached the enormous total of £573,428,000.

This result was largely due to Mr. McKenna's new tax, the Excess Profits Duty, which, together with the more specialised Munitions Levy, raised no less than £54,000,000 above the estimated £86,000,000. The Munitions Levy, which had been imposed by Mr. Lloyd George, was shown by experience to be defective, and was merged, at a later date, in the Excess Profits Duty.

THE BUDGET OF 1917

On 2nd May, Mr. Bonar Law introduced the fifth War Budget. Since this date was more than four weeks later than the date of Mr. McKenna's last Budget (4th April, 1916), it was assumed that no important changes and no large additions to taxation would be proposed. The forecasts proved to be remarkably close, so close, in fact, that Mr. Law felt compelled to declare that there had been no leakage from the Treasury.

During the three years of war our revenue system has been developed almost out of recognition. If we compare the last complete financial year before the war with that ending on 31st March, 1917, we find that the actual receipts were as follows—

	1914.	1917.	Increase per cent.
Customs	£35,450,000	£70,561,000	99
Excise	39,590,000	56,380,000	42
Estate Duties	27,359,000	31,232,000	14
Income and Property Tax (and Super-tax)	47,249,000	205,033,000	334
Excess Profits Duty (1917)	—	139,920,000	
Other Taxes	13,381,000	10,579,000	Decrease 21
Total Tax Revenue	163,029,000	514,105,000	315
Non-Tax Receipts	35,213,897	59,323,000	68
Total Revenue	198,242,897	573,428,000	189

From this table it is clear that the principal increase in revenue has come from direct taxation: indeed, it has been the experience of all the belligerents in this war that taxes on commodities are of little value for revenue purposes, though they may be useful in order to check waste or to reduce consumption. The first four War Budgets may be summarised thus—

1. *17th November, 1914.*—(Mr. Lloyd George.) Income tax doubled; tea duty raised by 3d.; beer duty raised by 17s. 3d. per standard barrel, equal to $\frac{1}{2}$ d. per pint.

2. *4th May, 1915.*—No addition to taxation; Revenue estimated at £272,000,000. Expenditure, £1,133,000,000.

In several quarters, Mr. Lloyd George has been severely criticised for not increasing taxation to meet the growing expenditure. When

Mr. McKenna arrived at the Exchequer it was so clearly imperative to find fresh revenue, that he brought in a special Budget on 21st September, 1915. Such action was unprecedented, but so were the situation and the expenditure. By this time the latter had grown to an estimated total of £1,590,000,000, and this, unlike other estimates during the war, proved larger (by £31,000,000) than the realised total. Mr. McKenna acted promptly and boldly. Taking the Income Tax as it stood, he added 40 per cent. to it, and he applied a new and heavier scale to the Super-tax. An equally important change was his extension of the tax to all incomes above £130 a year, and the reduction of the abatements from £160 to £120. At the same time, the sugar duty was raised from 1s. 10d. to 9s. 4d. per cwt., and the tea duty from 8d. to 1s. per pound. Other taxes, such as those on coffee and cocoa, were increased by one-half, and the petrol duty was doubled. Postal charges were raised, and import duties imposed on motor-cars, pianos, cinema films, watches, and clocks. The duty on hats was withdrawn partly, perhaps, because a masculine House was unable to define a "hat."

The principal innovation, which soon proved extremely remunerative, was an Excess Profits Duty (*i.e.*, a kind of special income tax of 10s. in the £ on all profits above the "pre-war standard," as defined in the Finance Act). The duty was not applied to farmers or to professional men. It is really earned income (*e.g.*, the salary of a manager of some kind of works is doubled, but he is not liable to the tax). Whether these exemptions were logical or expedient, we shall discuss later. Altogether the revenue for the current year 1915-16 was now reckoned at £305,000,000, and the new taxation was expected to yield £107,000,000 in a full financial year.

The fourth War Budget was introduced at the normal time, 4th April, 1916, and made a great impression upon the public, because it proposed to raise more than £500,000,000. As a matter of fact, it brought in few new taxes. Its chief feature was a further addition to the Income Tax, the normal or standard "unearned" rates rising from 3s. 6d. to 5s. The graduation, though steeper, was really improved by the addition, and only a comparatively small number of people will actually pay 5s. in the £, since that rate only applies to "earned" incomes when the

taxpayer's total income exceeds £2,500 and to "unearned" incomes when the total income exceeds £2,000.

The Excess Profits Duty, which had hardly come into operation during the financial year, was raised to 60 per cent., and its yield was estimated at £86,000,000, necessarily a rough guess. Additions were also made to indirect taxation, an extra 4s. 8d. per cwt. on sugar (raising it to 14s.), a tax on matches, and an amusement tax. A proposed addition to long-distance railway fares was dropped.

So productive did Mr. McKenna's scheme of taxation prove, that the Treasury estimates were exceeded by no less than £71,000,000; and when Mr. Bonar Law faced the House of Commons on 2nd May, 1917, the first four weeks of the new financial year had yielded £42,500,000 as against the £25,500,000 of April, 1916. The occasion was a great one. No Finance Minister had ever presented figures so vast, or could tell of taxation so fruitful in its yield yet so lightly borne, of expenditure so colossal yet so easily financed. The actual expenditure of the past year had come to £2,198,000,000, so that, while the revenue had been exceeded by £72,000,000, the expenditure was exceeded by £372,750,000. A deduction should be made from this vast total in respect of advances to our Allies and the Dominions of £594,000,000, making a total since the beginning of the war of £970,000,000, of which the Dominions' share was £142,000,000. Nearly all the gain in revenue came from the Excess Profits Duty, which realised practically £140,000,000 or £54,000,000 above the estimate. Mr. Bonar Law explained "that a large part of that excess between £30,000,000 and £40,000,000 was due to payments in advance carrying interest, which was not arranged for at the time the Budget statement was made, but which was put later into the Finance Bill." Income Tax and Super-tax between them accounted for a further £10,000,000.

For the present year, 1917-18, Mr. Law reckoned upon an expenditure of £2,290,381,000. Against this he proposed to raise a total revenue of £638,600,000, leaving the balance to be provided by borrowings. By a breach of tradition which would have shocked older Chancellors of the Exchequer, Mr. Law revealed the secret of his Budget (*i.e.*, his taxation plans) early in his speech. He said: "I do not propose to add any new taxation whatever,

and I only propose to make additions in the case of three existing taxes." These three were the Excess Profits Duty, now raised to 80 per cent.; the Tobacco Duty, raised by 1s. 10d. a pound, subsequently lowered to 11d.; and the Entertainments Tax, raised according to a scale which leaves penny and twopenny tickets unchanged.

By a further break with tradition, Mr. Law announced a fourth addition next day—an increase in the Dog Tax (*i.e.*, a very high tax on new dogs and a slight increase on old dogs, increasing in scale according to the number). This was to be effected by a separate Bill, and was not regarded so much as a means of raising revenue as a check upon food-consuming animals. This proposal was dropped on 19th July. The three taxes were estimated to produce £27,500,000—

Excess Profits	.	.	.	.	20,000,000
Tobacco	.	.	.	.	6,000,000
Entertainments	.	.	.	.	1,500,000
Total	.	.	.	.	<u>27,500,000</u>

This seems a very small addition, but the Treasury reckoned that the revenue system of 1916–17 would realise in the present year a further increase of no less than £35,000,000, in spite of a still more drastic curtailment of imports, and of further restrictions on brewing and distilling. Most items on the revenue side are expected to show a falling off which should be balanced by automatic increases in the two chief taxes, Income Tax and Excess Profits. The comparison between the present and the past year on the basis of 1916 taxation is shown on the next page.

It will be seen that the Excess Profits Duty, on the 60 per cent. basis, was expected to yield £180,000,000. This no doubt included Mr. Lloyd George's Munition Levy, a tax of which Mr. Law says: "It had this great disadvantage, that once a certain amount of profit was made, nothing more could be made in consequence—*i.e.*, all incentive beyond a certain point was taken away." The Levy is now dropped or merged in the Excess Profits Duty. Much unexpected light was thrown upon these two imposts by Mr. McKenna in his speech on 2nd May. So unsuccessful had the Levy proved as a revenue measure, "that the amount collected from all the controlled firms is practically negligible."

	1916-17.	1917-18.	Inc. %.	Dec. %.
Customs	£ 70,561,000	£ 64,750,000	—	8
Excise	56,380,000	34,850,000	—	38
Estate Duties	31,232,000	29,000,000	—	6
Income and Super-tax ¹ .	205,033,000	224,000,000	9	
Excess Profits Duty	139,920,000	180,000,000	29	
Other Taxes	10,579,000	11,000,000	5	
Total Tax Revenue	513,705,000	543,000,000	6	
Post Office Revenue	34,100,000	33,700,000	—	1
Crown Lands and Sun- dry Loans	8,706,000	8,100,000	—	7
Miscellaneous	16,517,000	27,100,000	64	
Total Revenue	573,428,000	612,500,000	7	

Professor Dicksee points out that Mr. McKenna's statement is based upon a misapprehension. "Necessarily there has been great delay in adjusting assessments on equitable lines; a large yield may yet be expected." Mr. McKenna's remarks on this point appear so relevant to the whole question of taxes in war time, that we print them in full—

I venture to say that the Committee will find—I do not know the figures—that the amount collected from all the controlled firms is practically negligible. I will explain why I think you have not been able to collect it from the controlled firms. Practically the whole of this enormous revenue of £140,000,000 of Excess Profits Duty has been gathered from firms other than controlled firms, and all the profits which might be called purely war profits, have so far paid almost nothing into this gigantic revenue. What is the reason? The Munitions Levy proceeded upon the main principle of taking everything from the taxpayer after a certain amount of profit had been made. There was no inducement left, on that principle, for the employment of further capital, or for the exercise of greater energy and industry. . . . It was so obvious that if that principle were left to free operation that there would be very little gathered in at all, that modifications were introduced giving discretionary allowance for additional output and for other particulars both of expenditure and of work, with which I need not now trouble the House. What has been the result? Instead of having a simple, direct, and easily understood tax, you had a tax which became so complicated that, while apparently it

¹ In answer to a question on 4th May, 1917, Mr. Bonar Law said: "Owing to the system of assessment and collection at the source, no definite statistics are available as to the total number of persons with incomes in excess of the exemption limit (£160 in 1913-14 and £130 in 1916-17), but the number is roughly estimated as follows: 1913-14, 1,200,000; 1916-17, 3,200,000."

was going to raise much more revenue, it has, in fact, hardly raised anything at all. I only mention this as an illustration of a plea for taxation to be simple and certain, so that the taxpayer may know what he has to pay, however much it may be. I am sure my right hon. Friend will agree with me, as it was my experience at the Exchequer, when I say that I found a wonderful willingness on the part of the people of this country to pay taxation on two conditions: first, that they must understand it; and, secondly, that they must believe it to be fair.

Why the Excess Profits Duty, which was expected to yield £180,000,000 on the 60 per cent. basis, should only yield £200,000,000 on the 80 per cent. basis was not explained by Mr. Law. It may be surmised that the estimate is reduced in order to allow for the effect of the restrictions on imports and exports. Taking account of the date of the Budget, these may have been thought to be greater than they have been up to the present. Further restrictions, too, were forecasted by the Prime Minister in his Glasgow speech (June 29th). No doubt the Treasury reckoned that while an 80 per cent. duty on the 1916 basis ought to yield £240,000,000, some £10,000,000 must be allowed for the loss which is probable when a tax already at a high rate is raised still further, and another £30,000,000 must be allowed for the restrictions.

With the additions to the Tobacco Duty and to the Entertainment Tax no fault can be found. Many people were surprised that no addition to the Spirit Duty found a place in the Budget in order to balance the large additions to the Beer Duty which have been made during the last few years. The proposed raising of the Dog Tax from 7s. 6d. to 10s. and the tax of 20s. on new dog licences might have been justified both as revenue measures and as helping to reduce the consumption of food. Indeed, other taxes with the purpose of checking consumption had been expected.

The Excess Profits Duty demands a more searching examination than it has yet received. Practically all belligerent countries have found it necessary or expedient to impose some kind of special taxation on war profits, and it is clear that such taxation is eminently just. But, in the first place, it must be observed that the Excess Profits Duty is not and has never been officially regarded as a tax on "war profits." According to the Finance Acts, it is applied to any trade or business where the profits for any accounting period between 1st September, 1914, and 30th June, 1915, exceed the "pre-war standard of profits" defined by the

Act. This pre-war standard is the "average of any two of the three pre-war years," the two years being selected by the taxpayer.

When first imposed, the rate was 50 per cent.; in his next Budget, Mr. McKenna raised the rate to 60 per cent.; and now (May, 1917) Mr. Bonar Law has raised it to 80 per cent. Sir R. H. Inglis Palgrave considers that the increase to 80 per cent. is "certainly inadvisable." Professor Dicksee observes: "It is working excellently, notwithstanding." It must be remembered that the duty does not apply to all rich men nor to all men who, having good incomes before the war, are making larger incomes now; and, as a matter of fact, it applies to a small percentage of the men who are getting larger incomes now than they had in 1913-14. Men engage in a trade or a business in order to make profits, and not from an altruistic desire to provide revenue for the Government. If they do not make profits, and substantial profits, they cannot carry on their business in such a way that it benefits the community. Mr. Barnard Ellinger writes: "I think the sooner this tax is got rid of, the better. I believe it is a very material factor in raising prices. It is unjust in its incidence; and the present rate, in many trades, is seriously limiting enterprise, leading to considerable extravagance and general laxity." He then quotes Mr. Bonar Law's argument, given below; and continues—

The Excess Profit Tax is not levied on men; it is levied on businesses. My income may be seriously reduced owing to the war; but if I hold shares in any one company which is making an excess profit, this part of my income is subject to extra taxation, although my total income is diminished.

The 80 per cent. rate could never have been imposed had there not been an idea that large businesses would be carried on by their own momentum apart from the tax. This is true to a considerable extent. Men cannot afford to shut down their works, lose the interest on their capital, and let their machinery rust and let their workpeople leave them; but it is overlooked that a very large part of the business of this country is done through merchants, and that the merchant looks to the per cent. of profit which he can make to recompense him for risking his capital in each individual transaction; and when the pre-war standard of profit has been earned, he is loth to risk his capital further without due remuneration; and if he does not buy, the manufacturers' works will have to stop.

To give one illustration. Suppose a merchant had been working on a margin of 5 per cent. on each transaction in the days before the war. At the outbreak of war, owing to the increased risk, etc., he decides he must increase his margin to 10 per cent., which he is able to secure. If all goes well and none of the risks eventuate which he

anticipated, he has made his pre-war standard of profit for the year (taking the year as from 1st January to 31st December) already by 30th June. In July he is offered some new business involving a risk of, say, £10,000, which shows him 10 per cent. profit. He now says to himself: "If I do this transaction, the Government is going to take 8 per cent. of the profit, leaving me with 2 per cent., of which I have to pay another $\frac{1}{2}$ per cent. in income tax. I would not have risked my capital before the war under 5 per cent. profit. I am certainly not going to risk it to-day with all the uncertainties for $1\frac{1}{2}$ per cent. If things go right, I only retain one-eighth of the profit which I have made. If things go wrong, I have to bear the whole of the loss."

The excess profit tax brings in a large revenue, and if it were turned into a tax on excess incomes, it would be much juster in its incidence and, in order to bring in the same revenue, would be considerably smaller in the percentage charged, and would not, I believe, have the same effect in raising prices nor act as a deterrent in fresh enterprise. The new conditions regarding stock are helpful, but should be extended to apply to commitments.

No prudent man, moreover, dreams of regarding all the "profits" (as understood by the Inland Revenue Authorities) as an income which he may safely spend.

A well-known economist writes to the Hon. Secretary: "Excess profits of business not of individuals; usual thing—Treasury selects the plan which will bring in most money, while the politician defends the plan which isn't adopted, but which looks popular. Tax on excess incomes of individuals wouldn't bring in much, because people's sources of income are mixed, and so excesses would be wiped out by deficits: excess incomes of businesses does bring in a lot."

During the Budget discussion, Mr. Bonar Law offered a justification of the Duty, which suggests that the real case for it is the increased income enjoyed by individuals, rather than the increased profits secured by firms and companies. Again, on 24th May, Mr. Law said: "I could not see any difference between taking Excess Profits and taking an increased Income Tax and Super-tax as well. The effect on the *man* will be the same. You cannot really say that a *man* is badly off who has something more than the income which he had before the war." That is so; but the argument is irrelevant, for the Duty is not levied on the *man* but on the business, except in the rather rare cases in which a big business is owned by one man who has no other source of income.

Very much the same defence was offered by Mr. McKenna in his own Budget speeches. If this official justification be accepted,

and it sounds convincing, two important corollaries follow. Any individual who has a larger income now than he had before the war is, *ex hypothesi*, able to pay a larger percentage of it towards the cost of carrying on the war: therefore the Duty ought to be applied to other persons, such as farmers, whose earnings have increased.

The exemption granted to farmers was not really just at the outset, though it may be explained by the fact that Mr. McKenna's Budget of September, 1915, subjected them to Income Tax for the first time. Previously they had paid on an assumed statutory profit equal to one-third of their rent, which freed all farmers with rentals of less than £480 from the tax. After 1915 they were made to pay on an assessment equal to the whole rent; and, as the tax itself was extended, a farmer became liable if his rent exceeded £130 a year. This was certainly a big change, though the farmer still enjoyed the special privilege of paying on his real profits, if he could show that these were less than his rent.

No adequate reason can be given for the continued exemption of farmers from income tax on their actual profits. The official reason, so often given in years past, was that they did not keep accounts and, consequently, did not know what their actual profits were. It is a novel principle that a citizen should be allowed to evade his duty to his country by pleading his own negligence. If the tradesman who supplied the farmer with his barley meal or his milk cans had pleaded that he could not pay income tax on his profits because he kept no accounts, the Local Commissioners would have put up his assessment until he was driven to keep accounts in self-defence. In these days of scientific farming, it should be assumed, as a matter of course, that a farmer does keep accounts, and detailed accounts, too. If a business man keeps no accounts, how can he tell what branches of his business are profitable?

There is certainly no good reason why the "profits from the occupation of land," as they are termed by the Income Tax Authorities, should not be the actual ascertained profits. There is not much reason, in theory, why the farmer should not pay Excess Profits Duty as well, though there are two practical reasons which might make it not worth levying. The exemption of the first £200 would free the small farmer from liability, and the big farmer might say: "If you are going to take four shillings out of every five which I earn above £—— a year, I won't earn any more."

It may turn out that the raising of the Duty to 80 per cent. will not increase its yield, and that so high a rate will lead to extravagance on one side and to restriction of output on the other. No such tax could be applied to individual earnings; and it can only be applied to collective earnings on the theory of momentum—the big undertakings have too much way on them to be checked while the Duty lasts.

II. THE NEED FOR CONTROL OF PUBLIC EXPENDITURE

In the review of the Budget of 1917, attention has necessarily been concentrated upon the raising of revenue and the means adopted for that purpose. But the cardinal fact of the amount and the nature of the expenditure must not be lost sight of, since it is this which determines the total of the bill which the nation is called upon to meet. The lack of preparation for a war of the magnitude of the existing struggle has dogged its whole finance up to the present. Sudden expenditure is always exceptionally costly, and rising prices have added to the evil. The House of Commons has felt itself compelled to vote immense sums almost without enquiry, so that in the words of *The Economist* (14th July) "it has lost or abandoned its constitutional rights as the controlling financial authority." Most writers on Public Finance have insisted upon the necessity of supervision of public expenditure, and this is never more vital than in time of war, more especially when the expenditure is immense and grows with an alarming rapidity. During the progress of hostilities there has been a tendency for the House to assert its rights of control, which movement culminated—at least for the present—in the presentation of a memorial, signed by 187 Members of all parties, to the Chancellor of the Exchequer, embodying the following resolution—

That a Committee be appointed consisting of Members of this House, with power to review all national expenditure, examine Ministers and officials, and report to the House.

In the debate which followed the introduction of this motion upon 6th July, 1917, the Chancellor of the Exchequer urged that the resolution appeared to him to involve a control of policy by the Committee which was inconsistent with Cabinet responsibility; and eventually a Select Committee was appointed in order to consider whether additional control can be secured and, if so,

in what way it can be best obtained, and also to examine Government Departments and to make recommendations either to the House of Commons or to the Departments regarding their respective expenditures.

When the discussions of 1909-10, in which the House of Commons asserted its right to control finance, are recalled, it seems an irony of history that, after only a few years, that control has become so lax. Parliament acting through its chosen Ministers establishes a policy, and the House of Commons is charged with the duty of procuring adequate supplies and also with the no less important function of seeing that these are expended with economy. Necessarily finance is, or should be, an element in the determining upon a policy; but, when a policy has been adopted, supervision over the expenditure upon it still remains a duty. How far this has been ignored is shown by the miscellaneous topics which are ventilated, though rarely fully discussed, in the debates upon Votes of Credit. Economy in expenditure is as much a maxim of sound finance as economy in the collection of taxation.

The evil of expenditure without adequate control has been growing, and its causes are deeply rooted in the existing social psychology. When the people are improvident, it would be idle to expect their representatives to be sparing in expense; while, conversely, public extravagance is adverse to private economy. Public and private extravagance are two noxious growths which spring from a common root. Therefore, for this reason alone, if for no other, the extent by which saving by the people has fallen short of what has been required is greatly to be deplored. Had saving been adequate, the people would have exerted strong pressure upon the House of Commons to control expenditure, and this would have been felt by the Cabinet and the great spending departments. The nation's resources are fully adequate to the immense task before it, provided they are not wasted. Ill-judged outlays, waste, and profusion are cutting into the financial strength of the country, and it would be prudent that this element of danger should be minimised, and that without avoidable delay. At this point, two things should be sharply distinguished. Large, even very large, expenditures are often the best economy, notably so when (as in the case of ample supplies of the proper type of munitions) they result in the reduction of casualties. In such cases,

the sparing of necessary supplies would be not economy, but a crime. But, upon the other side, while supplies should be adequate, it is also eminently desirable that they should be obtained at a reasonable cost. Moreover, there is reason to believe that immense sums could have been saved by forming plans which would have involved the minimum of change. Modern warfare has become so much industrialised, that it requires the preparation of large plants, and much waste can be avoided by co-ordinating plans in such a manner that these plants can be used, instead of being abandoned or diverted to less suitable uses before the stage of production for the purpose for which they were designed was reached. Even when the fullest weight is given to the waste involved in war through the improvisation of the special appliances which it demands, it still remains true that this waste can be diminished by care and supervision: first, in the careful planning; then in the co-ordination of plans; and, after that, in supervision of the outlay involved. It is a matter of regret that during the first three years of war these vital needs have only been recognised by comparatively few either in Parliament or amongst the general public. With the present high cost of the war, each day's neglect of these elementary principles is laying up an unnecessary burden for the future and, what may be even more important, is diminishing the financial reserves of the country.

The concentration of public attention upon the maxim that "nothing matters but winning the war," to some extent has distracted interest and thought from economy in public expenditure. The right point of view is to recognise that both public and private economy have their respective places in the national effort and that sound finance is a distinct contribution to military success. One element in a prudent war finance—and that not the least important—is economy in the framing of estimates and in the supervision of the funds granted. Inflation of prices has had an indirect effect in relaxing the careful control of expenditure of public funds, and the process of re-establishing economy can only be gradual. But the increase in the total daily expenditure, as well as in the daily expenditure after that proportion of it which represents advances to the Allies has been deducted, shows the need for more efficient measures to enforce economy than have been adopted in the early part of the war. It is the House of

Commons which is responsible, and Members of Parliament incur a heavy burden in delaying to take effective steps to secure this end.

III. TAXATION AND BORROWING

The failure to enforce economy in public expenditure is connected with the extent to which individuals economise. The House of Commons should give a lead to the general public; but, failing that, public opinion reacts upon the House. War finance, up to the present, has not resulted in stimulating the electors to put pressure upon their representatives. On the contrary, many citizens seem for the moment to benefit by the Government's lavish expenditure, and so such incentives towards control, as they could exert, have been absent. An instance of the latter tendency is to be found in the subsidising of the 9d. loaf at an estimated cost to the Exchequer of £40,000,000 a year. All financial history tends to show that lavish expenditure brings great evils, not only in the future, but even at the time it is increased. In 1917 its effects were felt in contributing with other and more important causes, already mentioned, towards the rise in prices.

While the methods of war finance have involved great sacrifices partly in the increased taxation as compared with that in times of peace, partly by an accelerated rate of saving for subscriptions to war loans, the burden of sacrifice has not been borne to a sufficient extent to enforce universal economy amongst the general public. It is obvious that, if the majority of the people were straitened either by taxation or by voluntary economy, they would not permit profuse expenditure by the Government. This is a consideration which points to the securing of increased amounts from taxation. But Parliament is in a comparatively weak position for the enforcing of augmented contributions from the people. The latter, at present, can reply to increased demands upon them "first check the great waste in public expenditure before making new large demands upon the taxpayers." The ultimate result is that the future financial position is doubly prejudiced: first, by the outlay being larger than that by which the necessary results could have been secured; and, secondly, through the charge, involved by interest upon the amount which it is necessary to borrow, being larger than it need have been.

Various methods might be suggested for striking a balance between the proportion of expenditure which should be raised by taxation and by loans respectively. In many discussions of this subject, scarcely sufficient attention has been paid to the total amount that must be raised. It may well be that the ratio, as between revenue from taxation and loans, should vary as between different scales of expenditure. Also the problem in practice is affected by considerations which are not purely financial. In the fourth year of war, the courses open to a Chancellor of the Exchequer are limited. On the one side, scarcity of suitable officials may preclude the imposition of new taxes which would require the services of a large staff. Also, there is more uncertainty as to the produce of an altogether new tax than of that from an addition to an old tax. Thus the procuring of revenue rapidly and with the least possible expenditure of labour in collection is an important feature of finance during the period of the war. On these grounds, war finance tends to concentrate upon increase in existing taxes which have proved fruitful; and, after that, in new direct taxes or, again, taxes imposed for a special object. The Excess Profits Duty falls in part under the latter heads. It will thus be seen that the raising of revenue during a time of war presents certain peculiarities. Also, it is, or should be, influenced by the widespread changes in distribution of income which arise directly out of a state of war and indirectly out of the artificial prosperity which is created by the free spending of Government funds. Where extravagance in individual expenditure manifests itself, the resource of taxation should be used to check it. In this respect, finance becomes an instrument of the national organisation in war time. Any superfluous expenditure of individuals (whether upon superfluities or upon an excessive amount of so-called necessities) is, in effect, a demand for services which are retained in the production of luxuries instead of being diverted to work of national importance. Where saving is deficient, taxation is one resource, and often the easiest one. At the same time, where there is a strong civilian demand for a commodity which is required for military purposes, the object in view may be obtained more directly either by prohibiting the supply of that commodity for civilians or else rationing them in the use of it. This course reacts on the financial position. In so far as civilian

demand might have been diminished by heavy taxation of the commodity, the Exchequer loses the revenue it could have obtained, and to that extent the amount that might be raised by taxation is diminished. There is another aspect of the situation which results from what happens with the quantity of income which would have been spent upon the commodity, if there had been neither prohibition nor rationing in respect to its use by civilians. This may be invested wholly in war loans or partly in war loans, or it may all be expended in some kind of superfluity. The last course is clearly detrimental to the national effort; while the two former may bring some benefit to the financial position, but only indirectly and by augmenting the total borrowings at the expense of the amount that might have been raised by taxation.

Moreover, borrowing is not uniform in character. The concealed loan which is secured by the Government without interest by excessive issues of paper money is to be deprecated. Its disadvantages are numerous and great. It involves a rise in prices and inflation. Apart from other causes, it forces the Government to pay more for its purchases, and it means that all other loans are paid to the Government in a somewhat depreciated currency, while they must be repaid eventually in a normal currency. In other words, inflation of the currency means the issue of domestic loans at an invisible discount. Thus, if it be assumed for purposes of illustration that over-issue has resulted in a depreciation of the currency of 10 per cent. and that a loan is issued at $97\frac{1}{2}$, the real discount is $12\frac{1}{4}$ per cent., which must be paid on redemption; while the purchasing power of the money borrowed is usually reduced by more than the real discount. Foreign loans have been issued free of British taxes, and therefore the Government loses the revenue it would have derived from income tax upon the sum borrowed if it had been obtained within the country. Now that income tax stands at a high nominal rate, the yield upon stocks is calculated upon the basis of the net yield; but, up to the date of the entry of the United States of America into the war, the rate of interest upon sums borrowed there on behalf of the British Government, though free of British income tax, was at least equal to that for domestic loans which were subject to this impost. Again, it has been shown above, as also in previous reports, that loans from banks as well as large spectacular loans, also produce

inflation. It follows that these types of borrowing have special disadvantages. These could be mitigated by the organisation of a sustained campaign which would make continuous borrowing a success, partly by a persistent and well-devised advocacy of saving in order to lend; and, secondly, in adapting the form of loans to all types of the investors who would thus be attracted and created.

Borrowing results in the creation of new Government securities and these are subject to the forces of demand and supply. The addition to the quantity in existence has involved a fall in the price of those already in circulation. Therefore, as regards present capital values, the great addition to the National Debt has resulted in an immense reduction in the market value of all first-class securities. Even if all the income derived from a group of Trustee stocks since the outbreak of war had been invested in Government loans, it would be far from sufficing to make good the depreciation at existing prices. Thus, almost unrestricted borrowing has not proved satisfactory from the point of view of the individual.

These various considerations show how desirable it is that the revenue derived from taxation should be higher than that obtained in the third year of the war, upon the assumption that hostilities continue. But to ensure a satisfactory financial position, it is no less necessary that (as shown above) a watchful eye should be kept upon expenditure. To add a further £150,000,000 a year to the sum derived from taxation may appear excellent and almost heroic, but this would not suffice to meet an increase of half a million in the daily expenditure. Necessarily a distinction must be made between the total expenditure (which includes that on behalf of the Dominions and Allies, amounting at 21st July, 1917, to £1,171,000), and that exclusively upon account of this country. As regards the advances to the Dominions and Allies, interest is payable at the end of the war; and, since the larger sums have been lent to the more developed countries, interest on the more important part of it will be paid. Accordingly, in the meantime, our own expenses are increased by the charge for interest; but, as each country provides interest in the future, its payments to us will be available to meet the charge upon so much of our debt as has been borrowed to provide the advances. Accordingly,

under favourable circumstances, the ultimate position would be that the total British debt will be diminished, as regards its service for interest, by such part of these advances as turn out to be "good debts." These transactions have an importance which is much more than a mere matter of finance. The services of Great Britain to the Allied cause in the power to make these advances have been very great. Even with the assistance of the United States, the need for them will grow in the concluding stages of the war, and it follows that it is prudent, indeed necessary, to keep the growth of borrowing upon our own account as low as possible. This again re-inforces the other considerations, previously adduced, for a higher revenue from taxation. Until the date of the end of the war can be fixed with certainty, it is desirable that the financial resources of the country should be conserved by keeping the yield from taxation as high as possible in the circumstances, thus retaining a margin of borrowing power available to meet any emergency which may arise. Even at the end of the struggle, if that margin of borrowing power be left undrawn upon, it will prove itself of the greatest possible value in the process of reconstruction during the early years of peace.

APPENDIX I

DIARY IN BRIEF OF EVENTS DURING THIRD YEAR OF WAR

AUGUST, 1916

- Friday, August 4.*—Second anniversary of British declaration of war on Germany.
- Monday, August 14.*—Extension of scheme for mobilisation of securities. Double official list prices restored on Stock Exchange.
- Thursday, August 17.*—Announcement in New York of loan to Great Britain for \$250,000,000 in the form of 5 per cent. Two-year Gold Notes maturing 1st September, 1918.
- Sunday, August 27.*—Roumania declared war on Austria-Hungary. Germany declared war on Roumania.

SEPTEMBER, 1916

- Friday, September 22.*—Report issued of the Faringdon Committee (appointed by Board of Trade), recommending establishment of British Trade Bank.
- Wednesday, September 27.*—Treasury announcement of new issue of Three-year 6 per cent. Exchequer Bonds, and discontinuance of sales of 5 per cent. Bonds maturing in 1919. Treasury Bill rates for six and twelve month maturities reduced to $5\frac{1}{2}$ per cent.
- Friday, September 29.*—Report issued of Board of Trade Committee on Food Prices.

OCTOBER, 1916

- Tuesday, October 10.*—President of Board of Trade announced Government decision to take control of wheat importation under Royal Commission. Large Government purchases of Australian wheat.
- Wednesday, October 11.*—Vote of Credit for £300,000,000.
- Friday, October 20.*—Issue of 5 per cent. Exchequer Bonds discontinued.
- Thursday, October 26.*—Announcement of new British loan in New York for \$300,000,000, to be issued in the form of $5\frac{1}{2}$ per cent. Three-year and Five-year Notes.

NOVEMBER, 1916

- Thursday, November 2.*—Notice issued by Treasury reminding holders of securities available under Scheme B that their holdings are required.
- Tuesday, November 7.*—Presidential Election in the United States of America.
- Friday, November 10.*—Mr. Wilson re-elected President.
- Wednesday, November 15.*—Statement by President of Board of Trade of Government's new food policy, including appointment of a Food Controller.
- Friday, November 17.*—Regulations issued relating to control of food supplies.
- Monday, November 20.*—Price of milk fixed and percentage specified of flour to be milled from wheat.
- Wednesday, November 29.*—South Wales Coalfield taken over by Board of Trade. Warning issued by Federal Reserve Board to American National Banks against lending money to belligerent Governments.

DECEMBER, 1916

- Friday, December 1.*—Announcement of British loan in Japan for £10,000,000.
Saturday, December 2.—Enemy close to Bucharest.
Sunday, December 3.—Cabinet crisis.
Tuesday, December 5.—Resignation of Mr. Asquith. Regulations issued restricting number of courses at meals.
Wednesday, December 6.—Fall of Bucharest.
Friday, December 8.—Completion of new Cabinet under Premiership of Mr. Lloyd George. Restrictions issued on sale and manufacture of copper.
Sunday, December 10.—Official list issued of Ministers of new Government.
Tuesday, December 12.—German Chancellor's speech announcing readiness to negotiate for peace.
Thursday, December 14.—Vote of Credit for £400,000,000.
Saturday, December 16.—Withdrawal of Treasury Scheme A and modification of Scheme B.
Monday, December 18.—New food regulations came into operation.
Tuesday, December 19.—New Premier's Speech in House of Commons announcing Universal National Service, and replying to Germany's proposal for Peace Conference.
Wednesday, December 20.—Announcement of restriction of train services and 50 per cent. increase in passenger fares after 1st January next.
Thursday, December 21.—Note received from President Wilson suggesting a Peace Conference.

JANUARY, 1917

- Monday, January 1.*—Sales of Exchequer Bonds and War Expenditure Certificates discontinued by the Government.
Tuesday, January 2.—Requisition of Copper Stocks.
Thursday, January 4.—Announcement that no further sales of Treasury Bills would be made at present.
Thursday, January 11.—Chancellor of the Exchequer announces terms of new War Loan at the Guildhall. Further issue of food orders.
Friday, January 12.—Issue of new War Loan prospectus. Text published of the Allied reply to the Peace Note of the United States, the reply stating in outline the terms of peace required by the Allies.
Thursday, January 18.—Bank Rate reduced from 6 per cent. to 5½ per cent. Announcement of new British loan in America for \$250,000,000, to be issued on 1st February in the form of 5½ per cent. One-year and Two-year Notes. Publication of Foreign Secretary's despatch to British Ambassador at Washington, amplifying reply of Allied Governments to American Peace Note.
Wednesday, January 24.—Order issued restricting output of beer, and release from bond of wines and spirits by 30 per cent. as from 1st April next.
Thursday, January 25.—Treasury scheme for mobilisation of securities put on a compulsory basis.

FEBRUARY, 1917

- Thursday, February 1.*—Publication of German Note to neutrals announcing intenser submarine campaign.
Saturday, February 3.—President Wilson severs diplomatic relations with Germany. Public asked to adopt voluntary rations.
Tuesday, February 6.—Plans announced of National Service Scheme.
Monday, February 12.—Vote of Credit for £550,000,000.
Thursday, February 15.—Government control of coal mines extended to whole of United Kingdom.
Friday, February 16.—Last day for applications for new War Loan.
Saturday, February 17.—Appointment of Director of Food Production.

Monday, February 19.—First list published of securities compulsorily requisitioned.

Friday, February 23.—Premier announced measures for restricting imports and enforcing home production.

Saturday, February 24.—New standard for bread.

Monday, February 26.—Chancellor of Exchequer announces total amount of subscriptions to War Loan to be record amount of £1,000,312,950.

MARCH, 1917

Thursday, March 1.—Restriction of work in non-essential trades.

Monday, March 5.—Announcement of grave potato scarcity.

Thursday, March 8.—Issue of Dardanelles Report.

Sunday, March 11.—British capture Baghdad.

Monday, March 12.—Rumblings of coming revolution in Russia.

Thursday, March 15.—Supplementary Vote of Credit for £60,000,000 to meet unforeseen expenditure. Abdication of the Czar announced in the British House of Commons.

Saturday, March 17.—Germans commence to retreat in France on a large scale.

Wednesday, March 21.—Announcement of further food restrictions.

Friday, March 23.—Announcement made concerning resumption of issue of Treasury Bills on system of tender.

Monday, March 26.—Issue of new food orders.

Friday, March 30.—Tenders accepted for £50,000,000 of Treasury Bills.

APRIL, 1917

Monday, April 2.—President Wilson declares for war with Germany in speech at special session of United States Congress.

Thursday, April 5.—Bank Rate reduced from 5½ per cent. to 5 per cent. America at war with Germany.

Friday, April 6.—Order issued against food hoarding.

Monday, April 9.—Commencement of British offensive. Battle of Arras. Vimy Ridge and 9,000 prisoners captured by the British. Austria severs relations with America.

Tuesday, April 10.—Committee of United States Congress recommend Bill authorising a war loan of \$7,000,000,000. New order issued for requisitioning dollar securities.

Wednesday, April 11.—Text issued of Corn Production Bill fixing minimum prices and wages.

Friday, April 13.—Prospectus issued of new running issue of 5 per cent. Exchequer Bonds. Tenders accepted for £50,000,000 of Treasury Bills.

Saturday, April 14.—United States financial programme passed unanimously by House of Representatives.

Sunday, April 15.—New Public Meals Order came into operation.

Monday, April 16.—Powerful appeal to American citizens by President Wilson. Maximum prices fixed for wheat, barley, and oats. Re-organisation of National Service Scheme.

Wednesday, April 18.—Cake and pastry order signed by Food Controller. American War Loan Bill passed through Congress. Sixth German War Loan said to amount to £638,500,000.

Friday, April 20.—Tenders accepted for £50,000,000 of Treasury Bills.

Sunday, April 22.—British Mission, including the Governor of the Bank of England, arrive at Washington.

Monday, April 23.—Renewal of British offensive. Food Controller authorised to take over principal flour mills as from 30th April. Announcement of new method of issue of Treasury Bills.

Wednesday, April 25.—Loan of \$200,000,000 by American Government to Great Britain. Post Office issue of new 5 per Cent. Exchequer Bonds.

Friday, April 27.—Tenders accepted for £20,000,000 of Treasury Bills.

MAY, 1917

- Tuesday, May 1.*—Peas and beans taken over by Food Controller.
Wednesday, May 2.—Introduction of Budget in House of Commons.
Thursday, May 3.—Announcement of important arrangements made between Bank of England and Federal Reserve Board of United States.
Friday, May 4.—Tenders accepted for £20,000,000 of Treasury Bills.
Saturday, May 5.—New list issued of requisitioned securities.
Tuesday, May 8.—Meatless day abandoned.
Wednesday, May 9.—Vote of Credit for £500,000,000. Maximum prices fixed for maize and oatmeal.
Friday, May 11.—Tenders accepted for £25,000,000 of Treasury Bills.
Saturday, May 12.—Military age raised to 50 (voluntary).
Tuesday, May 15.—Introduction of Reform Bill. Full text published of Royal Charter granted to British Trade Corporation.
Friday, May 18.—Tenders accepted for £20,000,000 of Treasury Bills.
Wednesday, May 23.—Lower prices fixed for oat and maize products. Second reading of Reform Bill.
Thursday, May 24.—Announcement that meat prices were to be controlled.
Friday, May 25.—Tenders accepted for £30,000,000 of Treasury Bills.
Wednesday, May 30.—New food orders issued for beans and cheese. Tea and tobacco to be controlled.
Thursday, May 31.—Announcement of resignation of Lord Devonport as Food Controller.

JUNE, 1917

- Friday, June 1.*—Tenders accepted for £40,000,000 of Treasury Bills. Meat Sales Order issued.
Wednesday, June 6.—Reform Bill in Committee.
Friday, June 8.—Tenders accepted for £25,000,000 of Treasury Bills.
Saturday, June 9.—Return of British Mission, including Governor of the Bank of England, from America.
Tuesday, June 12.—Speech by Prime Minister on labour unrest and profiteering.
Thursday, June 14.—Debate in House of Commons on British Trade Corporation.
Friday, June 15.—Tenders accepted for £25,000,000 of Treasury Bills. Lord Rhondda appointed Food Controller.
Tuesday, June 19.—Sales of Treasury Bills on the tender system discontinued. Resumption of daily sales of Treasury Bills at advertised rates of interest. Rate of interest allowed by Bank of England to clearing banks for three-day loans reduced from $4\frac{1}{2}$ to 4 per cent.
Saturday, June 23.—Subscriptions to American Liberty Loan announced to be equivalent of £607,045,000.
Monday, June 25.—Report published of Bankers' Institute Committee on Metric System.
Tuesday, June 26.—Mesopotamia Report published.
Wednesday, June 27.—Issue of prospectus of British Trade Corporation. American troops landed in France.
Friday, June 29.—Important speech by Prime Minister at Glasgow.
Saturday, June 30.—Food Controller endowed with powers for requisitioning and controlling prices.

JULY, 1917

- Tuesday, July 3.*—Treasury Bill rates raised from $4\frac{1}{2}$ to $4\frac{3}{4}$ per cent.
Saturday, July 7.—Coal Controller announces a scheme for the distribution of coal.
Monday, July 23.—House of Commons pass agricultural minimum wage clause in Corn Production Bill.

Tuesday, July 24.—Vote of Credit for record amount of £650,000,000.

Friday, July 27.—Prime Minister announced that from 5,000,000 to 5,500,000 men had been enrolled in the Service, exclusive of 500,000 naval men and nearly 1,000,000 men from the Dominions and Colonies.

Tuesday, July 31.—Commencement of great Allied offensive on Western Front. Food Controller authorised to take over small flour mills exempted from the Order of 23rd April.

AUGUST, 1917

Saturday, August 4.—Third anniversary of British declaration of war on Germany.

APPENDIX II

MONETARY INFLATION

BY A. H. GIBSON

MONETARY inflation may be defined as an increase in the aggregate of the elements constituting the immediate available purchasing power of a community not accompanied by a proportionate increase in the total supply of available goods and services continuously at the disposal of the community.

The immediate available purchasing power a community possesses under modern conditions of credit is the aggregate of its credit balances at its bankers; promises by bankers of further credit as required; and a relatively small amount of gold, silver, and notes in the hands of the public. Before the war, on 31st December, 1913, this aggregate was roughly £1,588,000,000. Three years later, on 31st December, 1916, it was roughly £2,213,000,000, an increase of about £625,000,000—or 39 per cent.—as shown by the table appended—

	At 31st Dec., 1913.	At 31st Dec., 1916.
Commercial Bank Deposits	£1,071,000,000	£1,479,000,000
Unused Bank Credit ¹	100,000,000	100,000,000
Savings Bank Deposits	255,000,000	265,000,000
Bank of England: Public Deposits	10,000,000	52,000,000
" " : Other Deposits ²	61,000,000	126,000,000
Gold in hands of Public ¹	50,000,000	15,000,000 ³
Silver in hands of Public ¹	15,000,000	35,000,000
Bank of England Notes in hands of Public ⁴	10,000,000	15,000,000
Scotch Bank Notes in hands of Public	8,000,000	16,000,000
Irish Bank Notes in hands of Public	8,000,000	20,000,000
Currency Notes in hands of Public ⁵	—	90,000,000
	£1,588,000,000	£2,213,000,000

¹ Estimated.

² To the extent that "Other Deposits" of the Bank of England includes bankers' balances (amount not ascertainable), the above table requires amendment.

³ Hoarded.

⁴ The Note Circulation of the Bank of England at 31st December, 1913,

The item "Unused Bank Credit" is introduced into the above table to show that in an estimate of the available purchasing power of a community, outstanding bank promises of advances to customers, if not already included in the first item, "Commercial Bank Deposits" (balances standing to credit of customers), must be taken into consideration. In London, a customer of a bank may arrange for a loan of a given amount to be credited to his current account forthwith, or arrange a loan limit, and instruct the bank, from time to time, to place specified amounts to his credit under the limit. (See *Bankers' Magazine*, pages 153 and 154, August, 1916.) In the provinces, banks do not credit their customers with promised advances, but agree to allow customers to overdraw up to certain limits. The London practice tends to inflate the item "Deposits" (credit balances) immediately on grant of loans; the provincial practice only on, and to the extent of, use of loans by customers.

It will be observed from the table that the great increase during the war in the total available purchasing power of the community has been mainly due to increase in bank deposits. The abnormal increase in bank deposits during the war has been due to bank subscriptions to various forms of war loans. In another part of this report (and in the last report) it is pointed out that when banks subscribe to war loans, they in net effect contract with the Government (in return for Government Securities) to credit the amount of their subscriptions to customers, to whom payments are due from the Government for goods and services supplied for the destructive purposes of war. The great expansion in bank credit during the war has been facilitated by the great increase in bankers' balances at the Bank of England, due to various credit operations between the Government, the Bank of England, and the joint stock banks; and the issue of Treasury Currency Notes.

An increase in the proportion between the immediate available purchasing power and the supply of goods and services at the was about £30,000,000; and at 31st December, 1916, about £40,000,000. Before the war it was generally considered that from 70 to 75 per cent. of the Bank of England Note Circulation was in the hands of banks.

⁵ Treasury Currency Notes and Currency Note Certificates outstanding on 31st December, 1916, amounted to about £150,000,000. It is estimated that on that date the banks held about £60,000,000 in the form of Currency Notes and Currency Note Certificates,

disposal of a community operates in raising commodity prices through the almost universal desire to satisfy human wants, whether necessities or not. Individuals with increased purchasing power tend to increase their purchases until their more urgent wants, appetites, or desires are satisfied, and in consequence to force up prices. Manufacturers, producers, and traders with increased purchasing power tend to compete more severely with one another for labour, materials, and finished commodities with the object of increasing their business profits.

It cannot be asserted that commodity prices *tend* to rise proportionately to any increase in the ratio between the purchasing power and supply of goods at the disposal of a community. If the available supply of goods be supposed not to vary from week to week, there is every reason to believe that over successive equal periods of time, increases in purchasing power would not be accompanied by proportionate rises in the index number of commodity prices. Probably a curve plotted with purchasing power as ordinates and the index number of commodity prices as abscissae would show an increasing vertical tendency as purchasing power rose, for the wants and desires of some people would become more and more satisfied with every rise in purchasing power.

Taking a community as a whole, whatever be the average tendency in the exercise of purchasing power at any given moment, the average would undoubtedly change under varying conditions and varying aggregates of purchasing power, and particularly in war time. The war has caused an enormous change in the distribution of the purchasing power of the community, part of which change will be more or less permanent for a long number of years. In most banks there has taken place during the war a gradual and large transfer of credit from deposit to current accounts, obviously due to Government war disbursements mainly finding their way to the credit of business accounts—a transference to be expected.

Whatever be the amounts of purchasing power exercised over a given short period of time by the three main classes of a community—the propertied classes (the rich), the middle classes, and the working classes—it would appear certain that over a period of years the amounts must necessarily change their proportion to

one another, for the continuous struggle between capital and labour is bound to cause a varying distribution of purchasing power between the three broad divisions of the community.

Two very simple illustrations may be given to prove how very difficult it must always be to estimate the effect of increased purchasing power on commodity prices. If we imagine several individuals to be each possessed, of, say, £500 purchasing power, in the form of a deposit at some bank, and each to earn or be given, say, £200, we know from experience of human nature that the proportion of the £200 each person will spend in a given period of time will vary, even if prices remained stationary; and that with each successive £200 the amount spent will vary even with the same individual. The second illustration is that we know from experience that if certain individuals or sections of a community exercise increased purchasing power and force up prices by competition, other individuals or sections of the same community, not possessing increased purchasing power, will voluntarily, or must by necessity, exercise less and less purchasing power—measured in quantities of goods—as prices increase.

It may be laid down as a general principle that any large amount of additional bank credit set in circulation gradually spreads itself by successive transfers over large sections of the community, and is eventually absorbed by the rise in prices due to the increased demands it at first created. Once the additional credit is diffused, the higher level of prices will tend to remain—unless followed by increased production or diminished consumption.

It is not possible to state exactly to what degree monetary inflation in the United Kingdom has caused commodity prices to rise during the war. Probably about 35 per cent. of the *increase* in prices up to the end of the third year of war is due to monetary inflation, leaving 65 per cent. due to other causes.

It is important to note that an expansion in bank credit is not in itself an economic evil, for bank credit is absolutely essential to modern production. It is only when increased credit is not accompanied or followed in the near future by increased production that economic evils arise. Persons obtaining grants of bank credit in reality obtain permission to consume existing goods and services. It is pointed out elsewhere that the great economic distinction between the Government in war time and the public

in peace time obtaining grants of credit from the banks is that the former uses the grant in order to produce and consume goods and services for the destructive purposes of war; but the latter, in order to increase productive power, and consequently to increase the available supply of goods at the disposal of the community in the future.

It is earnestly to be hoped that as soon as possible after the war, when it can be done without depressing capital values below parity, the banks will place on the market the greater part of the Government investments they have acquired during the war. Such a course of action will cause monetary deflation, through bank customers drawing cheques on their accounts to pay for the investments thrown on the market by the banks. It is absolutely essential that there shall be monetary deflation after the war if we are to enlarge the pre-war volume of our export trade. A reduction in the total available purchasing power of the community is bound to be followed by a fall in commodity prices, and hence in the cost of production.

Monetary inflation is obviously not always the cause of an increase in commodity prices. An increase in the proportion between the available purchasing power and goods at the disposal of the community may be due to stationariness or a decrease in the former, but a greater proportionate decrease in the supply of the latter. In this case, reduction in supplies of available goods would be the cause of increase in prices, and not monetary inflation. During the war both factors have been in operation, varying in influence at different times. Another factor tending to make for higher prices has been the transference of purchasing power (in the form of war loans), from persons who had no present intention of exercising it, to the Government who required the immediate exercise of purchasing power; in other words, there has been increased velocity of circulation.

If the supply of immediate available goods and services at the disposal of a community diminishes for any reason, prices are forced up because certain people are willing to pay higher prices sooner than go without the goods and services to which they have become accustomed. Those who cannot afford to pay the higher prices have perforce to reduce their consumption.

Again, when a number of people purchase a greater quantity

than hitherto of any article, for no other reason than that they have a greater desire for it, and not on account of being in possession of greater purchasing power, any rise in prices will be due to the greater demand caused by change in desire, and not to monetary inflation. Some other article or articles will, in this case, generally fall in price, owing to reduced demand, and the general level of prices will probably not be much affected.

The expression "commodity prices" used in this short article on Monetary Inflation is intended to mean a properly constructed index number reflecting changes in the prices of commodities considered as a whole, sometimes termed the "general level of prices."

APPENDIX III

WAR FINANCE :

SOME SUGGESTIONS AS TO FUTURE FORMS OF BORROWING

BY A. H. GIBSON

THE most marked feature of British War Finance during the course of the war has been a variety of forms of borrowing coupled with repeated extensions of bank credit (amounting approximately to £500,000,000 up to 30th June, 1917), when Exchequer receipts from taxation and loans from the public have been insufficient to meet Government expenditure. The economic evils incident to undue extensions of bank credit have been repeatedly pointed out in the reports of the Research Committee.

The most marked omission in internal war finance has been the lack of a comprehensive scheme of continuous borrowing, one framed to minimise the labour of collection and of conversions in the future, and based on principles of equity. Unprecedented conditions require unprecedented methods, framed with the future in view. Our war finance has hitherto been more fitted to the period of the Napoleonic wars than to modern conditions of banking and credit.

Should the war proceed for another twelve months, apart from receipts from taxation, approximately £4,000,000,000 will have to be raised in loans in a period of two years, inclusive of payment of maturing Treasury Bills and Ways and Means Advances, expenditure during disbandment of the Army, and payment of outstanding amounts due to manufacturers and other creditors of the Government. It is greatly to be desired that this stupendous amount may be raised on the voluntary system; but if loans are not forthcoming in sufficient amounts as required for the prosecution of the war, it will obviously be the duty of the Government, after giving reasonable warning, to adopt some form of equitable compulsory subscription.

Partly with the object of preserving, if possible, the voluntary system of subscription, and partly with the object of introducing a comprehensive and continuous scheme of borrowing, the following scheme is put forth as an equitable expedient for financing the war for the remainder of its duration—

1. It is suggested that banks shall send to their customers with credit balances a letter, signed by the Chancellor of the Exchequer, appealing to customers to agree voluntarily to subscribe to war loans on a certain date each month 10 per cent. of the balance due to them on that date, subscriptions to be to the nearest multiple of £10; and balances under £100, balances of domestic and foreign correspondents, and Savings Bank Deposits to be excluded from the scheme.

The minimum balance limit of £100 would exclude about 70 per cent. of banking accounts from the scheme, but only about 15 per cent. of the aggregate amount of the deposits, and hence would considerably minimise clerical work without materially reducing the total amount of subscriptions. Deposits showing a tendency to increase continuously by Government disbursements, etc., would contribute to war loans a larger amount each month. Dormant accounts would contribute a gradually diminishing amount: for instance, a balance of £1,000, after six successive 10 per cent. deductions, would be reduced to £531, a reduction of £469; and after a further six months to £282, a further reduction of £187: but the balance could never be exhausted, and deductions to war loan account would cease at the £100 balance limit.

2. Subscribers shall have the option of having all transfers recorded in a special war loan pass-book, or of taking up stock or bonds issued each six months—on 1st April and 1st October—and repayable at par in 1950. The Government shall reserve the right of redeeming war loan deposits and stock and bonds at par at intervals of five years—on 1st April, 1923, 1928, 1933, 1938, 1943, or 1948—on giving three months' notice to the holders. Preferably bonds and coupons shall not have the rate of interest printed thereon, so as to avoid the necessity for the issue of new bonds on conversion to lower rates of interest at the end of any of the five-year periods; but the current interest rate shall be advertised continuously in the *London Gazette*.

3. The rate of interest until 1st April, 1923, shall be fixed at 5 per cent. per annum, payable half-yearly on 1st April and 1st October, and shall apply to war loan deposits as well as to holdings of stock and bonds. It shall only be subject to reduction at the end of the five-year periods, and on each occasion of reduction, holders shall have the option of immediate repayment of loan. Any changes to higher rates of interest during any of the five-year periods (exceedingly improbable) shall be retrospective from date of last interest payment, thus avoiding split rates of interest on maturing coupons at any time. No difficulty would present itself to banks in cashing coupons on which the amount of interest was not stated. Cashiers need only be provided with a card showing net proceeds corresponding to various denominations of bonds at the current rate of interest less income tax.

4. War Loan Deposits shall be repayable on six months' notice being given by the holders, to expire on 1st April or 1st October of any year. Such deposits shall be transferable in whole or in part at any time, provided they remain War Loan Deposits, to whomsoever transferred, until the requisite notice of six months has been given and expired. Holders of War Loan Deposits shall at any time be able to obtain temporary advances from any bank, acting as agent of the Government, to an extent not exceeding the amount of such deposits, at a rate of interest 1 (or 2) per cent. higher than the current advertised rate on War Loan Deposits, with a minimum of 5 per cent.

5. Preferably all deductions from accounts at any bank shall be passed to one account at the same bank, to be drawn against by the Government.

ADVANTAGES OF THE SCHEME

(A) It would (provided the bulk of bank depositors agreed to the scheme) provide the Government with about £100,000,000 a month, or £1,200,000,000 a year (banking deposits on 31st December 1916, aggregated to £1,444,000,000 (*Economist*), exclusive of Bank of England and Savings Banks. In the calculation allowances have been made for agents' balances and balances under £100 excluded from the scheme). The present rate of internal borrowing is about £1,500,000,000 per annum (exclusive of loans

raised abroad, mainly in America). The difference of about £300,000,000 could probably be made up by some people being prevailed upon to set aside 15 or 20 per cent. of their bank credit balances each month for war loan purposes.

(B) It is sound finance. The aggregate of banking deposits would not be diminished or increased by the introduction of the system.

Some of the advantages of the pass-book system of war loan collection are outlined below—

(C) Large and small sums can be merged together in the same pass-book.

(D) If war deposits be accepted daily, the pass-book system is the most perfect form of continuous day-to-day borrowing that could be instituted.

(E) The pass-book system is particularly suitable as the medium for the working classes subscribing to war loans. It would prove far more popular with the masses than the present Exchequer Bonds and War Savings Certificates, because the masses are accustomed to the pass-book deposit system by long usage.

(F) A pass-book system of war loan collection would not injure the banks collectively, for such a system involves nothing more than a series of internal transfers of credits among their customers and themselves. Some of the banks after Government disbursements may get more than their share of the credits of other banks, but this also happens in present forms of borrowing on war account and continuously in peace times.

(G) It would save the banks and Government Departments an enormous amount of clerical labour in the future. Conversions to lower rates at any time after the war would involve no labour and no use of new stationery, for the same pass-book is usable whatever the current rate of interest. The amount of clerical labour involved in the periodical crediting of interest on deposit accounts is a small part of the labour involved in the cutting off, collection, and crediting of coupons of bearer securities.

OTHER POINTS

Should any customers of banks on receipt of the letter, signed by the Chancellor of the Exchequer, suggesting monthly 10 per

cent. deductions of credit balances to war loan account, not only not agree to the scheme outlined but withdraw their balances, they would, of course, be paid in Treasury Currency Notes, which they would take home and hoard until after the war. The net effect of such withdrawals would constitute a loan *free of interest* to the Government, for withdrawals by depositors in the form of Treasury Notes do not diminish bank deposits after the Government has disbursed the credit thereby created on its account in the books of the Bank of England. Even if depositors withdrew £50,000,000 in fear of the voluntary scheme later becoming compulsory, it would not be long before they returned the greater part of it, for they would soon realise that they were losing interest, apart from the danger of keeping large quantities of legal tender notes in the house.

The scheme set forth has been so framed that neither the ordinary depositor of a bank nor the business man or firm with a large credit balance at a bank shall have any valid reason for refusing to subscribe. If the reply of the non-subscriber be. "I cannot agree to transfer any part of my bank balance to Government account because I *may* want it after the war for private or business purposes," the scheme in effect replies: "You may withdraw your war deposit any day you wish by paying a charge of 1 (or 2) per cent. to the Government until the requisite notice expires"—a small charge compared with the sacrifices daily borne by the fighting forces. It is the feeling of uncertainty as to the extent to which they may require their bank credit balance in the future to meet unforeseen calls that keeps so many people back from subscribing to war loans.

Each 1st April and 1st October the Government would undoubtedly have to meet some withdrawals of war deposits, but it would have six months' notice of the amount required on a certain date. The withdrawals might be considered in the nature of a sinking fund.

Judging by the figures of banks that separate on their balance sheets the item "Amount due on Current Accounts" from the item "Amount due on Deposit Accounts," there has been during the war a gradual and large transfer of credit from deposit to current accounts, obviously due to Government war disbursements mainly finding their way to the credit of business accounts.

Future war loans must, therefore, largely come out of current account balances.

The war finance of the Government has now reached a stage when the rate of interest is having less and less effect in attracting internal loans, the character of the loans, the methods of collection, and the degree of advertisement being the dominant factors.

If the greater part of existing loans were voluntarily transferred to a continuous scheme of the nature advocated, an enormous amount of labour—due to repeated conversions in the future—would be saved the Government and the banks.

The internal book-keeping of banks for a pass-book system of war loans could be made very simple. Each branch would require to keep a special war loan deposit ledger, and would daily advise its head office of the amount collected or repaid on Government account. The head office would keep an account showing the daily balance due by the Bank on Government account, and against this balance the Paymaster-General might issue his war-rants—the payees, as far as possible, being customers of the drawee—thus avoiding material displacements of cash between the banks themselves. When interest was periodically due to be credited to war loan deposits, the Paymaster-General need only send one cheque to the head office of each bank.

Whilst writing on the subject of war loans, one cannot help reflecting that if the Government had early in the war taken over the factors of production necessary for the prosecution of war, making the existing owners "Captains, Colonels, and Generals of Industry," with salaries fixed on a military scale varying with degree of responsibility, paying reasonable wages to labour, Government expenditure during the war might have been less than 50 per cent. of its present amount. Equality of sacrifice is admittedly impossible during war time, but general national service has never been an impossibility. If it be the duty of men of military age, as it undoubtedly is, to go forth to fight for the preservation of a nation's ideals and the defence of its lands and homes, surely it is an equal duty—nay, a greater one, for it is free from bodily danger—for the remainder of the community to provide, collectively, the fighting forces with food, clothing, and the necessary materials for fighting, free of national payment in the

future. With a national debt, or mortgage on the community probably in the neighbourhood of £8,000,000,000 at the end of the war, future historians may well ask where was our sense of equity and proportion during the war. Justice to the fighting forces demands that in war time there shall be reduced civilian consumption and increased production and services, the saving in consumption and the extra production and services being a free gift to the State, to be laid on the Altar of Liberty.

APPENDIX IV

THE REVENUE, 1917-18: IS IT ADEQUATE?

BY J. E. ALLEN

As soon as Mr. Bonar Law had announced his financial proposals for the current year, experienced critics began to question the adequacy of those proposals to meet the growing expenditure. *The Economist* (5th May) said—

The Budget is a retrograde step in our war financial policy. . . . The elasticity of our revenue and the confidence with which the country faces the enormous expenditure that it has to meet only show how much more soundly our rulers might have financed the war, and how much less weight of after-war taxation need have been thrown upon industry.

Again, on 2nd June, *The Economist* referred to "the Chancellor's paltry addition of six millions to permanent taxation in a Budget which shows a deficit of 1,650 millions."

During the discussion in Parliament, several Members took the same view, especially during the debate on 24th May. Major Godfrey Collins summed up the Budget proposals thus: "It is a permanent debt of £80 millions a year, and a permanent increase in taxation of £7½ millions a year." The same Member was successful in organising a memorial to the Chancellor of the Exchequer, signed by 187 Members belonging to all parties, which proposed the following resolution—

That a Committee be appointed, consisting of Members of this House, with power to review all national expenditure, examine Ministers and officials, and report to the House.

So strong had the movement become, that the Government was compelled to grant a day for the discussion; and so on Friday, 6th July, the resolution was formally moved by Major Collins, and seconded by Mr. J. A. R. Marriott, the Conservative Member for the City of Oxford. A shelving motion was attempted by Mr. Montagu, but opinion in the House of Commons was clearly against anything of the kind; and finally the Chancellor of the Exchequer announced that the Government would not resist the

motion, provided that care were taken to separate the functions of the Committee from all questions of policy. Mr. Law continued—

I propose that we should appoint a Select Committee for two purposes: first of all—I am not attempting to give the exact terms of reference—to consider whether additional control can be obtained and in what way it can best be obtained as a permanent arrangement; and, in addition to that, we should authorise the same Committee to do at once what was done by those Cabinet Committees of which my right hon. friend spoke, and go into the Department to examine the method of expenditure, and make recommendations either to the House of Commons or to the Department. That is my proposal. It is not a shelving motion in any sense, and it only carries out what is certainly my own view, that we ought to do something more to satisfy not merely the House of Commons but the country that we are doing all we can to get value for the money we have spent.¹

If questions of policy are to be kept rigidly beyond the purview of the Committee, its sphere of control will be correspondingly limited, for it is an axiom of national finance that “expenditure depends upon policy.” Members who supported Major Collins’s resolution wanted a good deal more than Mr. Law offered. Sir Tudor Walters, *e.g.*, said—

We want to restore to the House of Commons not merely the right to audit the expenses that are being incurred, but to control the financial policy and expenditure of the country.

He quoted the powers exercised by the House of Representatives in America, which, though it has no powers to dismiss the President or any of his Ministers, yet has the power to vote supplies, and therefrom deduces “the power to cross-examine as to what is the policy of the Executive power of the State, even though that Executive is quite independent of the elected authority.” The Committee, with Mr. H. Samuel as Chairman, appointed

¹ The actual terms of reference are as follows—

“To examine the expenditure which is now being defrayed out of moneys provided by Parliament, and to report what, if any, economies consistent with the execution of the policy decided by the Government may be effected therein.

“To make recommendations in regard to the form of public accounts, the system of control within the departments and by the Treasury, and the procedure of this House in relation to supply and appropriation, so as to secure more effective control by Parliament over public expenditure.

“The Committee may appoint one or more sub-committees to investigate such matters as the Committee may deem necessary for the purpose of making such recommendations, and the Committee may appoint from outside its own body such additional members as it may think fit to serve on such sub-committees.”

sub-committees for special purposes, and published its first report just as this volume was going to press.

No doubt, however, the proposal of the 187 Members aimed at an imitation of the French system, for the French Chamber of Deputies, through its system of Committees, has far more control over the Government of the day than the House of Commons has exercised for many years past. In finance, especially, the House of Commons has become almost powerless: it has no hand whatever in shaping the Finance Bill until Government's proposals have been introduced, practically in their final shape in the Budget. Small alterations are permitted—a Chancellor will drop a second penny on cheques, or an addition to long-distance fares, or some other trifle; but the structure of the year's finance is settled before the House of Commons knows anything about it. There are, of course, obvious difficulties in discussing that part of the Finance Bill which deals with taxes on commodities, for legitimate trading, as distinguished from speculation, in any commodity would be suspended while the taxation of that commodity was being discussed. This is a real difficulty, though not an insuperable one: the indirect taxes, *e.g.*, might be left to the last, as they used to be in the Budget speeches, and settled on the Saturday before the Budget.

Indirect taxes, however, are at present an unimportant part of the Budget, except indeed the duties on beverages of all kinds, and on tobacco; they are certainly less important in England than they are in France, where the Budget Committee works well. The proposed Committee has obtained support from many quarters, partly, no doubt, because the country feels that it is not getting value for its money, but perhaps more because the recent growth of the expenditure to nearly £8,000,000 a day has caused serious alarm.

Let us see from the figures what justification there is for the statement that the existing taxation is inadequate. Roughly, the figures are as follows, if we omit so much of the war expenditure as will come to an end with the war itself and so much of the revenue as will end at the same time. The amount to be allowed for the War Debt is necessarily a mere guess, as it depends upon the length of the war itself and upon the character of the loans to our Allies. Mr. J. A. Hobson reckons on a Debt exceeding

£8,000,000,000; and Lord Leverhulme looks forward to one of £10,000,000,000, with an annual Budget of £1,000,000,000 (Birkenhead, 5th September). I take the smallest conceivable figure (£5,000,000,000).

	£
Normal Civil Expenditure, with additions (e.g., for Education).	225,000,000
Interest on War Debt (£5,000,000,000 at 5%).	250,000,000
Sinking Fund at 1%	50,000,000
Pensions	40,000,000
Total.	<u>£565,000,000</u>

On the other side, we may reckon the permanent income from existing taxes, on the supposition that the Excess Profits Duty comes to an end with the war, and is not replaced by an Excess Income Tax as a similar substitute.

	£
Income and Super-Tax	200,000,000
Customs	70,000,000
Excise	60,000,000
Estate (and etc.) Duties	30,000,000
Post Office	35,000,000
Miscellaneous.	25,000,000
Total	<u>£420,000,000</u>

This leaves a deficit at first sight of no less than £145,000,000, but allowances must be made for several additional items on the revenue side. Nothing, for instance, is included for interest on something like £1,300,000,000 lent to our Allies and Dominions, though it must be hoped that some of them will begin to pay it when the war is over. But from those Allies who have suffered most from German devastation, especially Belgium and Serbia, no payments can be expected for a long time, and perhaps most of these loans should be written off as gifts; unless, indeed, Germany can be made to pay, either in kind or in cash, for the destruction caused by her armies. The other loans may be set off against the expenses of demobilisation and of various claims for losses caused by the war to individuals or to particular areas. Some allowance has been made for increase in Customs, Excise, and Post Office when war restrictions are removed; but no reasonable estimate of all these increases will bridge the huge gap between £420,000,000 and £565,000,000.

When the Excess Profits Duty lapses, as Mr. Law says that it will, at the end of the war, businesses which have been paying the Duty may expect a fall in profits (it being assumed that their increased profits were due to a state of war); but at the same time they will pay Income Tax again on the whole of their profits, and accordingly the yield of the Income Tax itself should be increased. Other kinds of business, too (*e.g.*, those connected with seaside resorts on the East and South-East Coast), ought to revive when the shadow of war has been removed. Again, when some millions of soldiers return to ordinary life and work, the total output of the country—which is, after all, the real source from which taxation is drawn—ought to be largely increased. On the other hand, the apparent but fictitious prosperity which is produced by Government expenditure of borrowed money, by the great increase in the wages in nearly every trade, and by the inflation of the currency, will necessarily end with the war or, at latest, when demobilisation is complete. Consequently there will be a very large decrease in the profits earned and wages paid in the war industries.

I mention these numerous considerations on both sides in order to show that no absolute certainty as to the taxable income of the nation after the war can be attained. I may add, too, as Mr. Sidney Webb has said in his *How to Pay for the War*¹, that “the only real way to pay for the war is to replace, by new construction, the material wealth that has been destroyed.” Professor Dicksee queries: “Why by ‘material’ wealth? Why not by increased goodwill? Need we all be materialists?” But this does not relieve the Government of its duty to impose, here and now, sufficient taxation of a permanent nature to meet the permanent annual outgoings of the Exchequer when the war is over, and also to provide an adequate Sinking Fund for the extinction of the War Debt within a reasonable period. When peace comes, the Chancellor of the Exchequer ought to be able to announce a reduction in taxation, as he did after the Crimean and South African Wars. As things stand, he will have to announce a large increase.

In its former reports, the Committee urged a large and immediate addition to taxation, and we argued that taxation could be borne more easily and willingly during war time than

¹ Fabian Society, 25 Tothill Street, S.W.

afterwards. The course of events seem to strengthen that argument. During a war it is the duty of all citizens who are not fighting to deny themselves some of the luxuries, small or great, which they may legitimately enjoy during peace. The requirements of our huge armies are so vast that the ordinary consumption by the rest of the population must be cut down rigorously. As a matter of fact, and owing to the expenditure of borrowed money and to the inflation of the currency as mentioned above, the *money income* of most citizens is higher than it was three years ago. In the case of many wage-earners in the war-trade, it is twice or three times as high. At the same time, the supply of goods and services is less than it was three years ago: inevitably, therefore, prices have risen, and the real income is something much less than it appears to be. With the rise of prices, discontent among the wage-earning classes has risen too, and the less-informed part of the Press, especially in London, has fanned the flames of discontent by denunciations of what it calls "profiteering." No doubt there are cases where goods have been held for a rise, or where they have passed through several hands at an increasing price; shipowners, coalowners, and farmers have made large gains, but there is no evidence of any widespread profit-making on an illegitimate scale. What has happened is the natural result of the decreased purchasing power of the pound sterling. In many cases the profits are fictitious, being due to a mere rise in the money value of stocks, which may be followed, after the war, by a corresponding fall.

What has happened is precisely the consequence of the currency inflation, high wages, and shortage of goods, which might have been predicted. The three causes combine to send up prices, and so people who have a good supply of any popular commodity can sell it at a high price. What, it may be asked, is the bearing of "profits" on taxation? It is just this: the shortage of goods has made the rise of wages inevitable and, at the same time, disappointing in its immediate effects (though it will certainly give the wage-earner a strong strategic position at the end of the war), for as wages rise, prices rise also; and so the wage-earner is just where he was at the start. But all this time the War Debt is piling up, with its legacy of taxation in the future. If the Chancellor of the Exchequer would take a larger slice from *all*

incomes, including wages, he would do something to check the rise in prices and the growth of the War Debt. If at the same time he would reduce, instead of increasing, the supply of Currency Notes, he would do something further to check the rise in prices.

PRICES AND TAXATION

It will now be seen that the three things—prices, loans, and taxation—are closely connected. If the Chancellor of the Exchequer had been ready to tax everyone's income, the demand for goods, etc., would have been lessened to the extent of the taxation, and prices, apart from other causes such as an inflation of the currency, would have fallen proportionately. It is conceivable, therefore, that the extra taxation would have involved no appreciable sacrifice on the part of the taxpayers, though it would have involved some sacrifice of profit on the part of farmers and others who have gained by the high prices. In fact, the great advantage of paying for a war by direct taxation instead of by loans is that the first method sends prices down, while the second method sends them up. The rise in prices provokes popular indignation, because it seems to be due to some "rigging" of the market by producers or traders—though, as we have shown, this is a minor cause; whereas a rise in taxation is accepted as the inevitable result of war. Another cause of popular discontent is the enormous increase in the number of comfortably paid officials, some of whom hardly earn their pay.

The case against the present methods of finance is well put by *The Economist* (23rd June)—

Financing the war by inflation increases the cost of war; makes the Government borrow in depreciated currency sums that it will some day repay in money which, we may hope, will have returned to a more normal level of buying power; throws the cost of war on those least able to bear it by putting what amounts to a tax of something like 100 per cent. on many articles of common use; so produces a bad spirit in the country which is full of suspicions of profiteering; turns the exchanges against us; and so faces us with a serious problem on the day when the submarine no longer protects our gold store by raising the cost of shipping gold.

It is too late now to restore the nation's finances to a healthy state while the war lasts, yet much may still be done. An Interim Budget, such as those of November, 1914, and September, 1915,

might add another hundred millions to taxation. By mere administrative order, the Chancellor of the Exchequer might reduce, instead of increasing, the issue of Currency Notes; and at the same time he might establish a real gold reserve proportioned to the value of the notes in circulation. I cannot do better in conclusion than to quote from the memorial presented to President Wilson and his Cabinet by 275 teachers of economic and political science in forty-three universities and colleges in the United States. As a covering letter explains, the committee who organised the memorial do not deny that some borrowing is unavoidable (*e.g.*, for loans to the Allies). The 275 American economists argue that taxation rather than borrowing should be adopted as the principal means of meeting war expenditure. This view is based partly on theory, but mainly on the experience of the past two years; and the memorial argues that "the taxation policy will prevent the price inflation which must result from large bond issues" (*i.e.*, borrowing on the European plan). It continues—

The present high level of prices in Europe and America is primarily due to war bonds and paper money issued abroad. If the United States joins on a huge scale in this policy of borrowing, prices are bound to become far higher.

The policy of borrowing within the country itself does not shift any part of the nation's burden of war expenditures from the present to the future. All it does is to make possible a different distribution of the burden among individuals and social classes, to permit repayment to certain persons who have contributed income during the war by other persons after the war.

This war is a great social enterprise. It is the duty of every citizen to share in war's burdens to his utmost. For some the duty is to fight, for others to furnish money. For all the duty is without limit of amount. The citizen who contributes even his entire income beyond what is necessary to subsistence itself does less than the citizen who contributes himself to the nation.

Whether as a result of this memorial or not, President Wilson's Government has already adopted a policy of heavy and immediate taxation. The taxation, indeed, is so severe, that Professor Seligman, the chief American authority on taxation, has protested against some of the proposals; nevertheless the Senate has amended the Finance Bill in the direction of heavier taxation, especially in the case of large incomes.

APPENDIX V

LOANS OR TAXES ?

BY J. E. ALLEN

It is a curious thing that few people in this country have attempted to draw a distinction between the two kinds of warlike expenditure, *i.e.*, (*a*) that which should be defrayed out of taxation, and (*b*) that which should be defrayed out of loans. In time of peace, the distinction between current and capital expenditure is well understood.¹

Parliament insists most sternly on the distinction in the case of local authorities, and professes to observe it in the national accounts. But when war breaks out, it is taken for granted that the distinction has ceased to be applicable. Is this really so ? Has not the denial of the distinction proved the chief cause of the enormous increase both of expenditure and of the War Debt ?

The financial purist need not maintain his principles quite so strictly in wartime, but he may fairly demand that *some* principles should be observed. For three years now the war has been carried on without reference to any financial principles whatever. Let me attempt to lay down one or two general rules. It may surely be demanded that one large recurring weekly expense shall be paid wholly out of tax revenue—and this is wages, salaries, pay, and allowances of all persons working for the Government, whether in offices, factories, or in the Army and Navy. It may be assumed that in nine cases out of ten, or four cases out of five, except for comparatively small sums which are saved or paid in taxation, the weekly wages and allowances are spent during the week. This means that the spenders make a weekly claim on the

¹ Professor Dicksee does not think that this principle is ever "understood": he contends that the question whether any given set of workers shall be paid out of revenue or out of capital "depends on the work they are doing." "If the freedom of the world is won, its cost will be capital expenditure." Perhaps my dictum should be modified, so that the cost of work which will have a permanent value, as distinct from work undertaken solely for the purpose of the war, may be defrayed out of loans to the extent of its post-war value.

national supply of goods and services. If their wages are increased while the income of the rest of the community remains the same, there will be an additional demand for the goods and services, with the inevitable result that prices will rise. Thus the real wages will not be as high as they appear to be; while the rest of the community, who expect to purchase as much as usual with their incomes, will find that those incomes have lost a part of their purchasing power; in other words, the Government has reduced their incomes. So, in fact, they are "taxed" to provide the increased wages of the Government's employees; but they are not credited with the "payment," and after the war they will have the burden of the loans raised to pay the Government wages just as if they had made no sacrifices during the war itself. In short, they have to pay twice over: first by abstention and then in taxes.

If, on the other hand, all the money required to pay Government employees, whether munition workers, clerks, soldiers, sailors, or the families of enlisted men, were provided by taxation, the incomes of the rest of the community would be reduced by this amount,¹ and the demand for goods and services would be reduced too. Prices would not be forced up, and Government and other wages would not be forced up, in the attempt—probably a vain attempt—to keep pace with the rise in prices. It is no slight argument, too, that the increase in taxation required to pay increased wages and salaries would of itself exercise a salutary check, perhaps the only effective check, on the generosity (with other people's money) of the higher officials in the spending departments.² Money raised by a "capital levy" might have the same effect in causing inflation as money raised by loans, if the unfortunate capitalists paid their levy by borrowing, as many would do; so, too, in the case of earned income, where the earner had to borrow to pay the additional tax."

¹ Professor Scott says: "Probably by much more, if great disorganisation of production resulted . . . in the next year the source of taxation would fail."

² Professor Dicksee observes: "This assumes that *all* contributed equitably to taxation—surely a big assumption! I do not think that this need be assumed, provided that all the taxation obtained is paid out of income."

The principle of cash payment may be extended to purchases of daily supplies, if obtained in this country, such as food, coal, hay, etc.; for it may be assumed that the money paid for these supplies will be spent again by the sellers within a short period. In fact, any payment which means an addition to the income of any inhabitant of these islands should be made out of revenue, since it is in reality only a transference of spending power from one group of citizens to another group. If this fact is once understood, it will become clear that the money cost of the war has been enormously swollen by our practice (carried to far greater lengths by other belligerents) of paying for daily supplies out of loans. If we paid for them out of tax revenue, we should pay much lower prices, for we should maintain the purchasing power of money, partly by having less actual currency in circulation,—whether Currency Notes, bank deposits, or otherwise—but more effectively by reducing the demand for goods on the part of taxpayers.

On the other hand, there are payments which the Government may fairly make out of borrowed money (*e.g.*, for lands, buildings, ships, and other things of permanent value), because it may be assumed that the sellers will not treat the purchase money as income. Then there are supplies, munitions, and so on purchased from abroad. In normal times these would all be paid for out of tax revenue: in wartime they *might* be so paid, but this is asking a Government to face more unpopularity than it could survive; and so the financial purist must admit that the payment may be made out of borrowed money.

The question of loans to our Allies and Dominions is a difficult one. No information has so far been given as to how much has been lent to each Ally, and nothing is known as to the exact purpose for which each advance has been made. Nor is much more known about the advances to our Dominions, except that part of the Canadian loan has apparently been used to pay the United States for the raw materials of munition making. In the absence of facts, therefore, it is not easy to apply principles; but it seems probable, from statements made in France and in Canada, and from the tardy application of an income tax in both those countries, that our advances have been used to postpone taxation. In the case of Belgium (apart from her Congo resources) and of Serbia,

it is sufficiently obvious that a country which is largely occupied by the invader cannot provide revenue for her own Government, so that the Government must either borrow or surrender. These considerations, indeed, do not provide a complete answer to the question: "How should our Government raise the money which it lends to its Allies and Dominions?" It may seem strange that our Government should borrow from its citizens in order to lend to other Governments money which those Governments will spend in the purchase of daily supplies.¹

Yet until people are educated up to the point of perceiving what really happens in and through wartime expenditure, this doubtful process is sure to continue: they will no doubt discover for themselves whether the method of postponing war-payments until peace-time does not increase out of all proportion the money payment which must finally be made; and all this without freeing them from the sacrifices, during wartime, which result from the forcing up of prices and the wasteful consumption of goods.

It may be objected that the amount of taxation involved in the above proposal is far beyond anything that the country will bear. This objection is founded on a mistaken belief (*i.e.*, the belief that a nation can engage in a long war, and yet evade the cost of it by throwing the burden on posterity). It can certainly throw a heavy burden on posterity—we are doing so now—but it cannot avoid sacrifices while the war is going on. In our case, we are paying a good deal in taxation, at least the propertied classes are paying heavily, and all classes are paying heavily through the

¹ Sir Edward Brabrook writes: "The question seems to me to be—Are these Loans an investment or a subsidy? If a subsidy, then the application of the money is a vital concern to us. If an investment, then the only question is: Is it a safe investment? (*i.e.*, shall we get our money back?). To determine this, it is perhaps necessary that we should inquire how the money is going to be used; but otherwise, that does not appear to me to be material. If an investment, it should be raised out of capital (*i.e.*, by loans at a lower rate of interest than we expect to receive); if a subsidy, it should be paid out of revenue (*i.e.*, out of taxation), or out of so much of the loan capital as can rightly be made a burden on future generations."

rise in prices. A general rise in prices of 50 per cent. is equivalent to an income tax of 6s. 8d. in the £. If the rise in prices had been due entirely to indirect taxation, it might be said that all classes were paying at least the equivalent of a 6s. 8d. income tax. That only a small part of the rise in prices is due to taxation does not affect the argument. The fact that wages and many salaries or other incomes have risen reduces the sacrifice imposed upon the working classes, but it increases the sacrifice imposed upon other classes. It may be argued, indeed, as Professor W. A. Bone argues,¹ that—

By its War Loans at high rates of interest, the Government has already diminished by 25 per cent. the value of trustee and gilt-edged investments that yield a fixed income to the lower professional classes. This depreciation, which must have amounted in all to many hundreds of millions, is equivalent to a big capital levy already in operation.²

¹ *Common Sense*, 7th July, 1917 (p. 2).

² Professor Dicksee agrees with Professor Bone's argument, and with the inference that the sacrifices due to the war have been "unequally distributed." On the general question, he writes: "The truth is, of course, that cowardice and vote-catching are responsible for a 'popular' policy which is thoroughly unsound."

Mr. A. H. Gibson takes the same view: "The Government have brought their own troubles by timidity and bad finance."

Professor Scott does not accept Professor Bone's argument: "There is," he writes, "no actual sacrifice in the depreciation of Trustee investments by '25 per cent.'; it is really less, rather under 20 per cent." He continues: "Professor Bone is only partly right. The rate of interest has little to do with it, the increase in quantity of securities and particularly these being, so to speak, on tap are more important. *But* taxation upon the necessary high scale or a capital levy would have similar effects. Ricardo said almost all that needs to be said on this when he advocated a levy on capital for war taxation. But as I pointed out elsewhere (*On paying our War Bill, Proceedings Royal Phil. Soc., Glasg., 1915-16*, pp.122-137), his preference for taxation to the full amount of war costs requires modification in favour of loans, since his calculation does not take into account the modern probability that the interest will be reduced later by conversion. Further, the necessary amount could not be obtained by taxation, without the risk of the most grave consequences."

If Professor Bone is correct, the sacrifices due to the war have been most unequally distributed. A man whose property consists of securities such as Government or municipal stocks, railway or industrial debentures, or gas, water, bank, and other low-yielding shares, has lost one quarter of his property; but the man who owned ships, or mines, or agricultural land or stocks of commodities, whether foodstuffs or materials, finds that his property has appreciated during the war, and may be worth, not merely a quarter more, but twice or three times as much. The knowledge that certain persons or classes were "making money out of the war" has caused widespread resentment. No one would expect a great war to be waged without large economic disturbances: what rankles in the public mind is the belief that these disturbances have somehow resulted in fortunes for favoured individuals. It should have been the aim of the Government to minimise the two causes of economic disturbance which are mainly under its control, *i.e.*, those connected with taxation and borrowing, or with changes in the currency.¹

¹ Professor Scott observes: "It seems to me there is a contradiction when this argument is compared with what is said elsewhere about Excess Profits Duty (*e.g.*, that it checked business) (*see above*, p. 314). The only way taxation could be effective as regards profits from some commodities would be to take *all* the profit. The fact is that war causes an enormous diversion of demand, and the people whose property consists of that which does not experience war demand must be worse off. It would be difficult to reduce those who command what the Government wants urgently to the same level."

Professor Scott records his disagreement with the general argument in this Appendix: "Chiefly because no system of taxation could be devised in the time to get the necessary amount of revenue. Perhaps if the country made up its mind that there was to be another great war, say, in 1960, and worked hard in the interval, something of the kind might be approximated by then. If the principle suggested were adopted now, the immediate result would be that the lines of least resistance would be followed, and what were the propertied classes before the war would be pretty well eliminated by having their present burden more than doubled.

The Chancellor of the Exchequer himself is under no illusions as to the real state of affairs. In his last speech on the Finance Bill (17th July)—

I have realised as strongly as anyone, and from my position perhaps more keenly, what our position is. Do not let the House imagine for a moment that the country can go on spending money at the rate we are doing without serious disadvantage to the country. What is more, the disadvantage, I fear, will be realised more completely when the war comes to an end than it is being realised now. As long as we are raising money by loan, and the money is being spent and industry is going on, we are living in a false atmosphere. It is only when that comes to an end that we shall realise what the true position is.

MR. J. E. ALLEN'S REPLY

The aim of this Appendix was to suggest that the methods of financing the war hitherto adopted by our Government have imposed on certain sections of the community a very heavy burden, without relieving the remaining sections from extremely heavy taxation after the war. If taxation—and by taxation I mean chiefly Income Tax—had been increased as soon as war broke out, everyone would have been compelled to economise: we should have had no foolish cries of “Business as usual”; and as people would have had less money to spend, prices would not have risen to their present height. At the same time, the Government would have secured what it needed for military purposes, whether goods or services, at lower prices; consequently the money cost of the war would have been far less. We should not have needed all the vexatious and labour-wasting systems of rationing, least of all the exceedingly foolish subsidy in aid of a “cheap loaf,” which is expected to cost £40,000,000—borrowed money, too. Fancy borrowing to make an artificially cheap loaf, when the high cost

They would be eliminated for practical purposes, because their net incomes, after the new increased tax, would be so much reduced and the present value of their property would be the capitalised value of the reduced income (*e.g.*, what would a 4 per cent. Stock quoted at 100 in 1914 now 85 be worth with a 15s. income tax?) Thus trustee securities would become speculative counters fluctuating on expectations of increase or decrease of income tax!”

of the loaf and of other things is itself very largely due to a policy of borrowing! No doubt our policy of borrowing is not responsible for all the rise in prices: in a big war there must be a serious shortage of many things, and the prices of these things would rise. But as it is, *all* prices have risen, even of earthworms, as Professor Nicholson has pointed out elsewhere. Apart from borrowing and inflation, while prices of necessary things would have risen, prices of unnecessary things would have fallen (*e.g.*, of furs and jewellery), as they did fall during the weeks of uncertainty just after the outbreak of war.

The "disorganisation of production," which Professor Scott anticipates from heavy taxation, has, in fact, been caused in many industries by the innumerable and conflicting orders issued from Government offices, and by the attempts of the Food and other Controllers to fix buying and selling prices, *i.e.*, by Government action which might never have been needed had the check of adequate taxation been applied.

In my view—this in answer to Professor Scott—when the Government floats a thousand million War Loan, it lowers both the real and the nominal values of all pre-existing securities. The process resembles the serving of tea from a big urn: the Government fills a teapot from the urn and pours in some more hot water; the amount of liquid in the urn remains the same: it is still tea, but it is weaker.

If the Government had anything like the courage which it demands, on pain of instant death at the hands of a firing party, from the young men of all classes whom it has forced into the Army, it could secure *all* the money it needs for the war by taxation. After all, taxation is merely a more or less equitable way by which a Government obtains from its citizen the things necessary for war. Parliament might have passed a General Service Act as a logical corollary of the Compulsory Military Service Act, and then each citizen would be doing whatever work the local "officer commanding" might order.

The propertied classes would have their incomes cut down by an Income Tax rising, say, from 5s. in the £ on £500 a year to 15s. in the £ on £50,000, but they would still have their property free from the mortgage of the War Loans. As things are, a trustee security worth £100 before the war (*e.g.*, £135 of Consols) is now

quoted at £75, showing a nominal loss of 25 per cent.; but the £75 is its value in our present depreciated currency, so that the real value may not be more than £40 to £50.

Finally, a drastic but equitable Income Tax is the only effective machinery for "rationing" and enforcing economy on all classes.

APPENDIX VI

RAILWAY FARES

By J. E. ALLEN

ONE of the most marked characteristics of legislation and of administration connected with economic questions has been suddenness. Schemes are launched for immediate execution, and only then is discussion permitted. A case in point is the raising of railway fares. On 1st January, 1917, passenger fares in Great Britain (they have not been raised in Ireland yet) were increased by 50 per cent., with certain exceptions. These exceptions applied to small areas, but to a very large number of travellers; thus, season tickets, "traders' season tickets," and "workmen's" fares were not raised: the original proposal to add 50 per cent. to season tickets beyond 40 miles was dropped. Moreover, the new scale was not applied to any fares in London itself on the Underground system of railways; there were, however, exceptions to that exception, *e.g.*, a ticket from the Mansion House to Putney Bridge was still sold at the old price ($3\frac{1}{2}$ d.); but one from the Mansion House to East Putney, only half a mile further, brought the traveller under the 50 per cent. increase, and cost $7\frac{1}{2}$ d. The official reason for the increase in the second case is that East Putney also has a train service to Waterloo, and that if the District fare was left at the old rate, passengers would desert Waterloo and travel by District instead.

Had the question been discussed before the Orders were made, it would have been clear that this shifting of passenger traffic from the South-Western to the District was precisely one of the things which fare-raising was intended to effect. According to the statement of the Board of Trade's representative in the House of Commons, the object of fare-raising was not to secure more revenue; in fact, it was expected to yield less revenue, but to check travelling.¹

¹ Sir Edward Brabrook comments thus—

"I doubt very much whether this object has been attained. The better way to arrive at it would have been, it appears to me, a complete revision of the time tables, and reduction of the accommodation, so as to restrict

The demand for rolling stock, and especially for locomotives, from the Western Front was so large that the train service on the main lines had to be cut down. Now it follows logically from these premises that anything which diverts traffic from the main lines to subordinate lines—such as the District Railway, which has no locomotives or other rolling stock available for use in France, ought to be welcomed rather than discouraged. No financial question arises, for the Government gets all fares, whether on the District or on the South-Western.

The same line of reasoning suggests, too, that the exceptions to the fare-raising were not very logical, although it may be argued that people must be conveyed to their work of business, where there is no housing accommodation nearer. Some social reformers, however, would dispute this argument. "No," they say; "you do not want to encourage people to work in our huge and ever-growing towns; you should hold out inducements to make manufacturers remove their factories into the country, where the question of ground space for houses and for works presents no difficulties. The pressure of high railway fares, rates, and rents acts automatically in promoting the health of the community by spreading it more equally over the surface of the country." No doubt there was much *immediate* force in the following opinion of a well-known railway authority—

It was felt that the daily business life of London is so gigantic and important, that it would be contrary to public policy to increase the fares of those who travel to and fro in connection with it, as well as of those many thousands at present in the employ of the Government.

If it is a question of checking traffic in order to free rolling-stock, *all* traffic on main lines should be checked equally; indeed, as between one class of traffic and another, it is the short-distance or suburban traffic which throws the greatest strain on our railways, for it uses that part of the line nearest the London terminus,

it to that which is necessary. The abolition of tourists and excursion tickets seems a sound measure, but it has had comparatively little effect as far as one can judge in the absence of statistics. It seems a pity, speaking generally, that the assumption by the Government of control of all railways, by means of a joint committee, should not have been made the opportunity of putting an end to all the antiquated contrivances that hamper the working and all the inequalities that competition, or the want of it, has caused. Why, for instance, should the farce of pre-contract be maintained? Why should not I be allowed to take a shilling ticket entitling me to a shilling's worth of travel at any time, on any line, and in any direction?"

which is already most congested. One result of the exemption given to short-distance season tickets is that it now pays a traveller who has two journeys a week up to London to buy a season ticket, whereas before the change it would not pay him unless he had to make three journeys. Consequently the sale of season tickets has increased, and probably the number of journeys taken by the new season ticket-holders has increased also. All pecuniary inducement not to travel has certainly disappeared. As was suggested in our last year's report, there is much to be said for an increase in the short-distance fares, and for several strong reasons. Owing to the competition of omnibus and tram services, the short-distance fares had been "cut" by the railway companies until they were considerably below the "Parliamentary" rate of a penny a mile, a rate which Parliament had intended to be a specially low rate on a few slow trains. Now from a war-Government's point of view, the existence of competing and alternative routes was a reason for *raising* short-distance fares on the main lines, since the Government did not want the traffic and the alternative services were anxious to take it.

"Workmen's tickets," too, should have at least shared the increase which was applied to other tickets. Is there any reason why a return ticket from Clapham Junction to Victoria should cost 2d. at 7.45 a.m. and 6d. at 7.50 a.m.? There is no difference in the train accommodation or in the class of persons who travel: the idea on which "workmen's fares" are based is really out of date—the idea that a manual labourer's earnings are not large enough for him to pay a fair price for his necessities of life, and that, therefore, he must be subsidised by the ratepayer or the taxpayer. This theory led, a hundred years ago, to the well-known evils of the Speenhamland System and to the "grant-in-aid of wages." Even now the theory, as applied to agricultural labourers, is largely responsible for the lack of decent cottages in most rural areas: "The labourer cannot pay a fair rent for his cottage, therefore it must be provided for him by his employer or by the ratepayer." The "workmen's train" starting before 8 a.m. means, in practice, a great waste of time, since people whose work does not necessitate their leaving home until 9 o'clock start an hour earlier, in order to get a cheap ticket; and the hour, of course, is wasted.

Two changes have been made more recently. The Ministry of Labour announced on 11th July that—

In order to facilitate the transfer of labour to important work, arrangements have now been made whereby workpeople proceeding to work of national importance, on which they have been placed through an Employment Exchange of the Ministry of Labour, will be provided with a railway warrant to enable them to travel at a reduced rate. The reduced rate is five-eighths of the ordinary fares (*i.e.*, of the fares in operation before 1st January, 1917, without the 50 per cent. increase). The reduced rates will thus be considerably less than half of the full rates with the 50 per cent. increase.

This, again, is a very sudden and serious alteration of prices made, apparently, by a single Minister and without the authority of Parliament. By departmental decree, something for which the public at large must pay a shilling is to be sold to a section of the public at fivepence! The second change was a much smaller one: at the end of August it was announced that the fares on "railways in the Central London area" (*i.e.*, those which were left unaltered on 1st January) would be revised. Again, workmen's and season tickets were unchanged, and the additions actually made to other fares were slight, the short-distance fares being left as they were. A revision of this kind was quite justifiable, for most passengers in the Central London area were being carried at a loss even before the war, as is shown by the dividends paid, or not paid, by the Metropolitan (1 p.c.), the District (*nil*), and the Tube Railways.

The question of railway fares as a whole lies outside the Committee's reference, though I may be permitted to express an opinion adverse to the sudden fare-raising of 1st January. This fare-raising was, in its effect, a heavy tax imposed on the public, and it was imposed without the authority of the House of Commons. It was not only an unconstitutional tax; it was also a partial tax, for it drew an arbitrary distinction between citizens living in or near the capital, who were specially exempted, and citizens living in other parts of the country, who were made to pay the new imposts. It had a third and most unusual fault—it was not even expected (so Mr. Roberts, M.P., explained) to bring in any fresh revenue. In the absence of all figures relating to traffic receipts and expenses, one can only surmise that the official expectation has proved unfounded.

Another well-known authority on railways writes—

The railway companies (and, therefore, the Railway Government Committee acting for or through the companies), have legal power to raise rates, provided they do not exceed the amounts which they have, under their statutes, power to charge. For example, the recent increase of 25 per cent. on portions of the District Railway, and the London Electric Tube Lines, is well within the limits of the companies' maximum rates. But I greatly doubt whether such a startling increase as 50 per cent. on the rates charged on the long-distance traffic can be made without exceeding the rates authorised on our main lines.

It will doubtless be said that this very great increase, which has borne so heavily and unjustly upon vast numbers of travellers, who are compelled to use the trains in order to carry on the legitimate commerce of the country, is legal under the Defence of the Realm Act, or some other war measure. Whether this is so or not, I don't know; but I very greatly doubt whether such an increased rate could be enforced in cases where it exceeds the authorised statutory rates. The burdensome increase of 50 per cent. must have brought a greatly increased revenue into the pockets of the Government: and it is not surprising that the Chancellor of the Exchequer cannot be induced to give the figures. It is only another illustration of the hasty and secret way in which our commercial finance has been, and is being, handled.

With regard to "workmen's fares." The whole question needs review. In earlier days, an attempt was made to define what was meant by a "workman." Such a definition exists in the Metropolitan and District Railway Acts. The whole thing broke down in practice. How was it possible for a booking-clerk to discover whether the applicant for a ticket was a *bonâ-fide* working man in receipt of weekly wages? Hence it was decided to regard every traveller who books before 7.45 as a working man: which is manifestly absurd. The ridiculous anomaly is seen in the case of a man who books before 7.45 at workman's rates; while his daughter, who has, say, to be at a Government office at 10, books at full rate. The father earns, say, £3 a week, and the girl 15s. I doubt whether the railway companies make any profit at all out of the workmen travelling with workmen's tickets. Indeed, this favoured individual is practically travelling at the expense of the ordinary traveller, who has, consequently, to pay a higher rate, though his income is very often less.

While I think it is necessary in London and our suburbs to charge a *differential* rate, and not, as in New York, a *flat* rate, yet I am personally of opinion that there should be one class only, and no "season tickets," and no workmen's rates.

I remember some years ago, a workman grumbling to me because he had to pay 2d. every morning for a half-hour's journey to the City. I asked him whether he would work for me at the rate of 4d. per hour. He said he "would see me — first." And yet that, as I told him, was what he expected the railway company to do for him.

A strong case can be made out for a small addition to *all* railway

fares, say, a halfpenny under three miles, a penny on the next seven miles, and twopence on distances beyond ten miles. Such a tax, applicable to season tickets and workmen's tickets, would bring in a very large revenue, or, in the alternative, would meet the greatly increased cost of train services due to the rises in wages and in the price of coal.

The increased railway fares are just as much a tax as the addition to the Tobacco Duty, and ought only to have been imposed by a special resolution of the House of Commons. Just before Christmas the country was surprised to learn that the Government proposed to cut down the number of trains at Christmas, to refuse leave to soldiers, and perhaps to increase long-distance fares. An outburst of unselfish indignation forced the War Office to cancel its order refusing leave to soldiers; but, later, when Parliament had risen (on 22nd December) for a six weeks' vacation, the threatened increase of fares was put into force. Shortly before Parliament rose, Mr. Bonar Law admitted that "the arrangement made (with the railway companies) at the outbreak of war had proved a good bargain for the State." Consequently, the increased fares were not required in order to pay rent or interest to the railway shareholders, who have watched the successive additions to the Excess Profits Duty with a melancholy assurance that it would not apply to them, however hardly it might hit their rivals in the transport world—the shipowners.

CHAPTER VI

TRANSPORTATION: THE NEW SUB-SECTION OF THE SECTION OF ECONOMIC SCIENCE AND STATISTICS

By PROFESSOR A. W. KIRKALDY

THIS year the Council of the British Association has consented to an enlargement of Section F by the addition of a Sub-Section on Transportation. It may be asked, was it necessary to mark out methods of communication specially in this way. At first sight, it would appear that the old designation of the Section was sufficiently wide, especially as at Birmingham in 1913 one great branch of the subject was somewhat exhaustively treated. A whole session was then devoted to a discussion of inland waterways, both for small craft and for ocean-going steamers; and a considerable part of another session was occupied with a consideration of the latest ship canal—Panama—then rapidly approaching completion. The following year, in Australia, the economics of marine fuel were discussed, and the proceedings touched upon questions which affect all methods of transport, viz., the provision of the necessary fuel—coal, oil, or gas.

When, however, the Organising Committee of the Section met this year (1917), it was felt very strongly by several members that, owing to recent developments, the great question of transport and communication had entered upon a new stage. The Royal Commission on the Waterways of the United Kingdom, appointed in 1906, had four years later presented to Parliament a voluminous and thoroughly practical report. Whether one agreed or disagreed with its main conclusions and recommendations, there could be no question but that the subject had become practical politics, and the Report could neither be disregarded nor laid on the shelf. Naturally the railway magnates were hostile to much that was advocated; but it was obviously to the interest of the railways that there should be no uncertainty as to the future of canals, for uncertainty would lead to suspicion among investors.

Thus the question was ripe for a decision—either Great Britain must decide to modernise her canals or say with no uncertain voice that railways had proved their superiority, and that such developments as were required in the interests of both internal and foreign trade must be made in connection with the land road and not with the inland waterways. Then came the period of international unrest; and it was realised that, in case of war, our railways would have to be prepared to bear an enormous strain in the carriage of troops and material. Possibly during those fateful months something was planned; anyway, when the war did break out in the summer of 1914, the railways were speedily reorganised on a drastically new system, administered by those who had previously been responsible. The story of what our means of internal communication have accomplished for us, from the moment when the “contemptibles” were so successfully concentrated and transported to France, right through the war period to the present moment, has yet to be told. It will be an interesting narrative, and one hopes that its publication may not be long delayed, once we return to normal times.

One great point that interests every Briton now is that our railways have been concentrated under one management. Thus, one of the great decisions to be reached after the war will be whether we shall (1) hand back the management to the individual companies; or (2) appoint a Railway Board somewhat on the lines of the Boards which administer the London and Liverpool Docks; or (3) go to the extreme, and nationalise the railways altogether.

And whilst this question of concentration of management is being discussed, it might be well to bear in mind details in the practical working of railways which require bringing up to date. The handling of goods, and the working of the larger goods depôts, generally require modernising and remodelling. One comprehensive scheme has been before the country for some years past. This scheme entails the construction of a great central sorting depôt where trains and trucks shall be dealt with and sorted by automatic methods. It is claimed that a well organised policy in this direction should effect a saving of many millions of pounds a year. Connected with this more or less directly is the question of the further utilisation of the motor vehicle and electricity, both

for goods and for passenger traffic. In a word, enlightened progressive management must be the watchword of our transport agencies when peace is restored.

Admittedly, modern conditions demand that the railways of the United Kingdom shall be brought more nearly in touch with national interests—defensive, industrial, agricultural, and commercial. This does not necessarily imply any adverse criticism of pre-war policy. The fact seems to be that the time has come when developments must be recognised and provided for; nor must tradition, however good it may have been, stand in the way of progress, provided that the advocates of any progressive measures can prove their contention.

It was a consideration of these and other factors which influenced the Committee to request the Council to recognise officially Transportation in a somewhat special manner. We have commenced to set in motion a great policy of national reconstruction. This affects many spheres and a number of diverse interests. Our future well-being will depend greatly on the wisdom manifested by those who have these vital matters in hand. Foremost among those activities which will make or mar the Empire comes Transportation—inland and overseas. If in the comparative quiet where British Association investigators work, a practical solution can be suggested for some of those questions on which experts differ, the efforts of this new sub-section will not be in vain.

Hitherto the study of the economics of inland transport has been considerably hampered by want of information. Other countries, notably America, have developed systems for compiling railway statistics and accounts, which are of the greatest value to both the railway manager and the economist. Here, in England, one of the leading authorities on the subject has for years past been pleading for a greater amount of light, by means of a more practical and completer system of railway statistics. One of our railway companies has, indeed, attempted something in the desired direction. What is required is that a uniform system drawn up by practical men shall be applied to all the railways of the kingdom. Thus the new sub-section may well spend a good deal of time formulating an ideal system of statistics for railway managers to consider. It has been pointed out in the

first chapter of this volume that the additional wages paid to railway servants will vitally affect railway dividends. It is almost certain that an attempt to reduce wages would end disastrously, so that railway managers will have to devise other means for securing a dividend sufficient to attract the stream of capital on which progress and improvements depend. Here, again, is a sphere in which members of the Economics Section can investigate and make suggestions.

But, as has already been shown, there are other agencies besides railways involved in this question. Railways, canals, and roads have been with us as commonplace necessities all our lives. As to roads, the internal combustion engine has recently worked a revolution, and the motor vehicle has not yet by any means said the last word as to what it can do for civilisation. The war, moreover, has produced the *standard ship*. Here is an almost unexplored sphere in economics, where the economist or business man, together with the naval architect and engineer, has many a problem to face. Moreover, the destruction wrought by the war—in loss of shipping tonnage, the shortage of foodstuffs and raw materials—insistently demands an immediate answer to some of the more urgent problems.

Looking at another part of the same subject, it is obvious that our fuel resources have hitherto received far too little attention. It is true that our coal mines have been worked, and that statesmen have revelled in quoting the millions of tons of coal produced. Yet the scientist tells us that hitherto there has been criminal waste in the utilisation of coal, and it is certain that economic pressure after the war will compel us to mend our ways in this respect.

There has been great loss occasioned by the war. Blood and treasure have been poured out as never before, and the pessimist will have the time of his life when the final balance is struck. Yet there is another side to the account. Our best qualities have been quickened, our inventiveness has been spurred to attempt what at one time would have been deemed impossible. It is unnecessary to specify every sphere in which the war has caused healthy developments. In connection with the subject under review, there is, however, one notable achievement to chronicle. Aircraft have come to stay, for in some directions they give

promise of advantages over other means of transport. Shipping freights are small compared with railway rates, because, for one thing, the ocean provides a ready-made road, whilst the railway requires a specially constructed track which swallows up immense sums of capital. Aircraft enjoy even greater facilities, for the air road causes even less friction than the water road. It is possible that within a comparatively short time, passengers, mails, and light goods will be carried through the air more quickly, more pleasantly, and less expensively than by the present normal methods. Here, again, is a great field for the investigation of the economist and the engineer. Sections F and G stand together in the British Association organisation; on this new subject there is an urgent call that they work together. On the committee of the new sub-section, it is hoped that economists, engineers, railway, canal, shipping, and mining experts will all work together in the solution of the great problems outlined here. At present, the ablest men are engaged in winning the war; but should peace be arranged within the next few months, it may be possible for the Section on Transportation to show its initial result at the 1918 meeting of the British Association.

INDEX

- AFTER-war employment of women, 78
 — taxation, 19
 Agriculture and women, 146 *sqq.*, 154
 —, wages of women in, 156
 Appeal to American citizens, President Wilson's, 194 *sqq.*
- BANK deposits, increase of, during war, 226
 — of England and the war, 207 *sqq.*
 Banking position during the war, 207
 Banks, employment of women in, 137, 138, 139
 —, joint stock, and the war, 215
 Belfast Centre, reports of women's work, 121
 Birmingham Centre, reports of women's work, 128
 Borrowing and taxation, 273, 317, 348
 —, future, suggestions as to, 333
 British adaptability, 3
 — credit, firm basis of, 1
 — loans raised in America, 267
 — self-depreciation, 2
 Budget of 1917, 305
- CAPITAL, need of new, 4
 Cash reserves of banks, 215 *sqq.*
 Clyde District, dilution in, 25
 Collective bargaining and Workshop Committees, 164
 Commodity prices and cost of living, 202
 Conscription of securities, 237
 Cost of living and commodity prices, 202
 Credit, effect of war on, 187 *sqq.*
 —, votes of, 242 *sqq.*
 Currency and the war, 204
 —, effect of war on, 187, 204
- DEFENCE, cost of, before war, 19
 Diary of third year of war, 322 *sqq.*
 "Dilution," 25
 — statistics, 28 *sqq.*, 81 *sqq.*
- ECONOMIC measures of 1916-17, 192 *sqq.*
 — problem of supplies, 190
 Economics of war, 1
 Economy and war expenditure, 192
- Efficiency and overtime labour, 56
 — — — — — pay, 60
 Excess Profits Duty, 308
 Exchange rates (neutral) in Germany, 280
 Exchanges, foreign, during the war, 277, 280, 284
 Exchequer bonds, 249
 Expenditure and policy, 341
 — chargeable against revenue, 242
 —, national, and taxation, 304
 —, the public, need for control of, 314
 — in reparation, 5
 — of wealth on accessories, 5
 — — — feeding nation, 5
 Extravagance, national, 4
- FARINGDON Committee on Trade Bank, 292
 Female labour, sources of, 62 *sqq.*
 Finance, effect of war on, 187 *sqq.*
 Foreign exchanges during the war, 277
 — — — of Europe and the United States, 280
 — — —, present and future, effect of war on, 284
 — trade and the war, 199
- GERMAN organisation, 2
 — peaceful penetration, 8
 — policy of aggrandisement, 8
 — war loans, 267
 Germany, exchange rates (neutral) on, 280
 Glasgow Centre, reports of women's work, 126, 127, 131, 140
 Government borrowing to date, 273
 Great Britain's income, 3
- HEALTH and overtime labour, 56
 — of women in munition factories, 55
 Hours of labour, 15
 Housing of population, 15
- INCOME of Great Britain, 3
 — tax and taxation generally, 20
 Increased production, necessity for, 15

- Industrial training of women, 68 *sqq.*
 Irish banks and employment of women, 139
 ——— women's migration to England, 123
- JOINT stock banks and the war, 215
- LABOUR, sources of, female, 86
 Leeds Centre, reports of women's work, 81 *sqq.*, 132
 Loans, British, raised in America, 267 *sqq.*
 Loss of time, causes of, 56
 Losses, shipping, in 1917, 194
 ——— through war, 6
- "MECHANICAL rigidity," 3
 Mobilisation of securities, 234
 Monetary inflation, 327
- NATIONAL Debt, 276
 ——— expenditure and taxation, 304
 ——— extravagance, 4
 ——— life, improvement in conditions of, 4
 ——— prosperity, what is, 11
 Newcastle-on-Tyne District, dilution in, 25
 ———, reports of women's work, 124
 North-Eastern Railway as a trading concern, 14
- OVERTIME labour and efficiency, 56
 ——— health, 56
 ——— pay and efficiency, 60
- POLICY and expenditure, 341
 Political events of 1916-17, effect of, 188 *sqq.*
 Population of Great Britain, increase of, 4
 Post Office Savings Banks deposits, 232
 ——— work and women, 135 *sqq.*
 Products of industry, division of, 11 *sqq.*
 Public expenditure, need for control of, 314
- RAILWAY fares and the war, 357
 Railways and the war, 21, 22
 Replacement of men by women in industry, 24 *sqq.*
 ———, detailed reports, 81 *sqq.*
 Reports on trades, 81 *sqq.*
- Reports on Trades, Belfast, 121 *sqq.*
 ———, Birmingham, 128 *sqq.*
 ———, Glasgow, 126, 127, 131, 140
 ———, Leeds, 81 *sqq.*
 ———, Newcastle-on-Tyne, 121
 Revenue and expenditure, 238
 ———, adequacy or inadequacy of, 340
 ———, necessary, after war, 19
 ———, sources of, 241
- SAVINGS during war, 6
 ——— of the nation, 4
 ——— banks deposits, 231
 Scottish railways and women's work, 134
 ——— banks and employment of women, 137 *sqq.*
 Securities, conscription of, 237
 ———, mobilisation of, 234
 Shipping losses in 1917, 194
 Shop Stewards' Committees, 175
 Spain and the war, effect on trade, 283
 Spendthrift life of the nation, 4
 Substitution of men by women, possibilities of, 115
 Success of women in men's work, 41 *sqq.*, 124
 Supplies, economic problem of, 190
- TAXATION after war, 19
 ——— and borrowing, 273, 317, 348
 ——— income tax, 20
 Time, loss of, causes of, 56
 Timekeeping, comparison between men and women, 44, 51. *See also* Reports on Trades, *passim*
 ———, remedies for bad, 61
 ———, statistics, 47 *sqq.*
 ———, value of, 54
 Trade Unions and women's work, 79, 83
 ———, organisation of women, 83
 ——— Bank or corporation, 292 *sqq.*
 ———, nature of, 9 *sqq.*
 Trades in which women are substituted for men, 39, 40
 Training of women in agriculture, 154
 Tramways, women's work on, 131, 132
 Transference of specialised capital and labour during war, 6
 Transport and the war, 363
 ——— and women's work, 134
 Treasury bills, 244 *sqq.*
 Tyne District, dilution in, 25
- VOTES of Credit, 242 *sqq.*

- WAGES of women, 76, 83, 96, 103, 109,
 113, 120, 125, 156
 War Budgets and payment of war, 17
 —, cost of, to date, 19
 — expenditure certificates, 248
 — to date, 273
 — finance, suggestions as to future
 borrowings, 333
 — Loan, 230, 255 *sqq.*
 Ways and Means Advances, 248
 Welfare supervision, 41, 72, 157
 — work, 72, 126
 Wilson, President, and his appeal to
 American citizens, 194
 Women, employment of, 24 *sqq.* *See*
also Reports on Trades, *passim*
 —, —, after the war, 78, 81 *sqq.*
 Women's employment and Trade
 Unions, 78, 79, 83
 — Farm Labour Committees, 147
 — War Agricultural Committees,
 149
 Workers' Shop Organisation, 163 *sqq.*
 Workshop Committees, 160 *sqq.*, 164,
 167, 168, 178, 183

THE END

PITMAN'S BUSINESS HANDBOOKS

AN ABRIDGED LIST OF PRACTICAL GUIDES FOR
:: BUSINESS MEN AND ADVANCED STUDENTS ::

COMPLETE LIST OF COMMERCIAL BOOKS POST FREE ON APPLICATION

CONTENTS

	PAGE		PAGE
BOOK-KEEPING AND ACCOUNTS	1	SECRETARIAL WORK	4
BUSINESS TRAINING	2	INCOME TAX.	5
INSURANCE	2	ECONOMICS	6
ORGANISATION AND MANAGEMENT	2	ADVERTISING AND SALESMANSHIP	6
STOCK EXCHANGE	3	LAW	7
SHIPPING	3	BUSINESS REFERENCE BOOKS	8
BANKING AND FINANCE	4		

BOOK-KEEPING AND ACCOUNTS

ADVANCED ACCOUNTS. A Manual of Advanced Book-keeping and Accountancy for Accountants, Book-keepers and Business Men. Edited by ROGER N. CARTER, M.Com., F.C.A., *Lecturer on Accounting at the University of Manchester.* In demy 8vo, cloth gilt, 988 pp., **6s. net.**

AUDITING, ACCOUNTING AND BANKING. By FRANK DOWLER, A.C.A. and E. MARDINOR HARRIS, *Associate of the Institute of Bankers.* In demy 8vo, cloth gilt, 328 pp., **5s. net.**

THE PRINCIPLES OF AUDITING. A Practical Manual for Advanced Students and Practitioners. By F. R. M. DE PAULA (*of the firm of De Paula, Turner, Lake & Co.*) ; *Fellow of the Institute of Chartered Accountants ; Lecturer to the Chartered Accountant Students' Society of London* In demy 8vo, cloth gilt, 224 pp., **5s. net.**

ACCOUNTANCY. By F. W. PIXLEY, F.C.A., *of the Middle Temple, Barrister-at-Law, Ex-President of the Institute of Chartered Accountants.* In demy 8vo, cloth gilt, 318 pp., **5s. net.**

COST ACCOUNTS in Principle and Practice. By A. CLIFFORD RIDGWAY, A.C.A. In demy 8vo, cloth gilt, with 40 specially prepared forms, **5s. net.**

COMPANY ACCOUNTS. By ARTHUR COLES, F.C.I.S. With a Preface by CHARLES COMINS, F.C.A. In demy 8vo, cloth gilt, 320 pp., **5s. net.**

MANUFACTURING BOOK-KEEPING AND COSTS. By GEORGE JOHNSON, F.C.I.S. In demy 8vo, cloth gilt, 120 pp., **3s. 6d. net.**

GOLD MINE ACCOUNTS AND COSTING. A Practical Manual for Officials, Accountants, Book-keepers, etc. By G. W. TAIT (*of the South African staff of a leading group of mines*). In demy 8vo, cloth gilt, 93 pp., **5s. net.**

THE ACCOUNTS OF EXECUTORS, ADMINISTRATORS AND TRUSTEES. With a Summary of the Law in so far as it relates to Accounts. By WILLIAM B. PHILLIPS, A.C.A. (Hons. Inter. and Final), A.C.I.S. In demy 8vo, cloth gilt, 150 pp., **5s. net.**

PRACTICAL BOOK-KEEPING. By GEO. JOHNSON, F.C.I.S. In crown 8vo, cloth, 420 pp., 5s. net.

RAILWAY ACCOUNTS AND FINANCE. Railway Companies (Accounts and Returns) Act, 1911. By ALLEN E. NEWHOOK, A.K.C., *Chief Accountant to the London and South-Western Railway Company*. In demy 8vo, cloth gilt, 148 pp., 5s. net.

PERSONAL ACCOUNTS. By W. G. DOWSLEY, B.A., *Lecturer in Book-keeping on the Modern Side, St. Andrew's College, Grahamstown*. Size 15½ in. by 9½ in., half leather, 106 pp., with interleaved blotting-paper, 6s. 6d. net.

FARM ACCOUNTS. By the same Author. Size 15½ in. by 9½ in., half leather, 106 pp., interleaved blotting-paper, 6s. 6d. net.

DEPRECIATION AND WASTING ASSETS, dealing with their treatment in computing annual profit and loss. By P. D. LEAKE, *Fellow of the Institute of Chartered Accountants*. In demy 8vo, cloth gilt, 257 pp., 10s. 6d. net.

BUSINESS TRAINING

LECTURES ON BRITISH COMMERCE, including Finance, Insurance, Business and Industry. By the RT. HON. FREDERICK HUTH JACKSON, G. ARMITAGE-SMITH, M.A., D.Lit., ROBERT BRUCE, C.B., SIR DOUGLAS OWEN, W. E. BARLING, J. J. BISGOOD, B.A., ALLAN GREENWELL, F.G.S., JAMES GRAHAM. With a Preface by the HON. W. PEMBER REEVES. In demy 8vo, cloth gilt, 295 pp., 7s. 6d. net.

THE THEORY AND PRACTICE OF COMMERCE. Being a Complete Guide to Methods and Machinery of Business. Edited by F. HEELIS, F.C.I.S., *Examiner in Business Training to the Lancashire and Cheshire Union of Institutes, etc., etc.* Assisted by Specialist Contributors. In demy 8vo, cloth gilt, 620 pp., with many facsimile forms, 6s. net. Also in 2 vols., each, price 3s. net.

THE PRINCIPLES AND PRACTICE OF COMMERCE. By JAMES STEPHENSON, M.A., M.Com., B.Sc., *Head of the Higher Commercial Department, Regent Street Polytechnic, London; Examiner in Commercial English and Business Methods to the Union of Lancashire and Cheshire Institutes*. In demy 8vo, cloth gilt, 650 pp., with many facsimile forms, 6s. net.

INSURANCE

INSURANCE. A Practical Exposition for the Student and Business Man. By T. E. YOUNG, B.A., F.R.A.S., *ex-President of the Institute of Actuaries*. With a Practical Section on Workmen's Compensation Insurance, by W. R. STRONG, F.I.A.; and the National Insurance Scheme, by VYVYAN MARR, F.F.A., F.I.A. Third Edition, Revised and Enlarged. In demy 8vo, cloth gilt, 440 pp., 7s. 6d. net.

INSURANCE OFFICE ORGANISATION, MANAGEMENT, AND ACCOUNTS. By T. E. YOUNG, B.A., F.R.A.S., and RICHARD MASTERS, A.C.A. Second Edition, Revised. In demy 8vo, cloth gilt, 150 pp., 5s. net.

ORGANISATION AND MANAGEMENT

OFFICE ORGANISATION AND MANAGEMENT. Including Secretarial Work. By LAWRENCE R. DICKSEE, M.Com., F.C.A., and H. E. BLAIN, *Late Tramways Manager, County Borough of West Ham*. Fourth Edition. In demy 8vo, cloth gilt, 310 pp., 5s. net.

- COUNTING HOUSE AND FACTORY ORGANISATION.** A Practical Manual of Modern Methods applied to the Counting House and Factory. By J. GILMOUR WILLIAMSON. In demy 8vo, cloth gilt, 182 pp., 5s. net.
- THE PSYCHOLOGY OF MANAGEMENT.** The Function of the Mind in Determining, Teaching, and Installing Methods of Least Waste. By L. M. GILBRETH. In demy 8vo, cloth gilt, 354 pp., 7s. 6d. net.
- INDUSTRIAL TRAFFIC MANAGEMENT.** By GEO. B. LISSENDEN, *Author of "Railway (Rebates) Case Law," etc., etc.* With a Foreword by CHARLES E. MUSGRAVE, *Secretary, London Chamber of Commerce.* In demy 8vo, cloth gilt, 260 pp., 7s. 6d. net.
- MUNICIPAL OFFICE ORGANISATION AND MANAGEMENT:** A Comprehensive Manual of Information and Direction on matters connected with the work of Officials of Municipalities. Edited by WILLIAM BATESON, A.C.A., F.S.A.A., *Borough Treasurer for the County Borough of Blackpool.* With contributions by eminent authorities on Municipal Work and Practice. In crown 4to, half-leather gilt, with about 250 diagrams and forms, 503 pp., 25s. net.
- CLUBS AND THEIR MANAGEMENT.** By FRANCIS W. PIXLEY, F.C.A., *of the Middle Temple, Barrister-at-Law.* In demy 8vo, cloth gilt, 240 pp., 7s. 6d. net.
- SOLICITOR'S OFFICE ORGANISATION, MANAGEMENT, AND ACCOUNTS.** By E. A. COPE and H. W. H. ROBINS. In demy 8vo, cloth gilt, 176 pp., with numerous forms, 5s. net.
- COLLIERY OFFICE ORGANISATION AND ACCOUNTS.** By J. W. INNES, F.C.A. (Swithinbank Innes & Co., Chartered Accountants), and T. COLIN CAMPBELL, F.C.I. In demy 8vo, cloth gilt, 140 pp., 5s. net.
- GROCERY BUSINESS ORGANISATION AND MANAGEMENT.** By C. L. T. BEECHING, *Organising Secretary of the Institute of Certificated Grocers.* With Chapters on Buying a Business, Grocers' Office Work and Book-keeping, and a Model set of Grocers' Accounts. By J. ARTHUR SMART. In demy 8vo, cloth gilt, about 160 pp., with illustrations, 5s. net.
- DRAPERY BUSINESS ORGANISATION AND MANAGEMENT.** By J. ERNEST BAYLEY. In demy 8vo, cloth gilt, 300 pp., 5s. net.
- STOCKBROKER'S OFFICE ORGANISATION, MANAGEMENT AND ACCOUNTS** (*see below*).
- SHIPPING OFFICE ORGANISATION, MANAGEMENT, AND ACCOUNTS** (*see below*).
- BANK ORGANISATION, MANAGEMENT AND ACCOUNTS** (p. 4).
- INSURANCE OFFICE ORGANISATION** (p. 2).

STOCK EXCHANGE

- STOCKBROKER'S OFFICE ORGANISATION, MANAGEMENT AND ACCOUNTS.** By JULIUS E. DAY, *Manager to an inside Firm of Stock-brokers on the London Stock Exchange.* In demy 8vo, cloth gilt, 243 pp., 7s. 6d. net.
- THE HISTORY, LAW, AND PRACTICE OF THE STOCK EXCHANGE.** By A. P. POLEY, B.A., *of the Inner Temple and Midland Circuit, Barrister-at-Law;* and F. H. CARRUTHERS GOULD, *of the Stock Exchange.* Second Edition revised and brought up to date. In demy 8vo, cloth gilt, 348 pp., 5s. net.

SHIPPING

- SHIPPING OFFICE ORGANISATION, MANAGEMENT, AND ACCOUNTS.** A comprehensive Guide to the innumerable details connected with the Shipping Trade. By ALFRED CALVERT. In demy 8vo, cloth gilt, 203 pp., with numerous forms, 5s. net.

- THE EXPORTER'S HANDBOOK AND GLOSSARY.** By F. M. DUDENEY.
Foreword by W. EGLINGTON, *Founder and Editor of "The British Export Gazette."* In demy 8vo, cloth gilt, 254 pp. 5s. net.
- THE PRINCIPLES OF MARINE LAW.** (See p. 7.)

BANKING AND FINANCE

- MONEY, EXCHANGE AND BANKING,** in their Practical, Theoretical, and Legal Aspects. A complete Manual for Bank Officials, Business Men, and Students of Commerce. By H. T. EASTON, *Associate of the Institute of Bankers.* Second Edition, Revised. In demy 8vo, cloth gilt 312 pp., 5s. net.
- FOREIGN EXCHANGE AND FOREIGN BILLS IN THEORY AND IN PRACTICE.** By W. F. SPALDING, *Certificated Associate, Institute of Bankers; Fellow of the Royal Economic Society; Lecturer on Foreign Exchange at the City of London College; Author of "Foreign and Colonial Banking Appointments."* In demy 8vo, cloth gilt, 227 pp., 5s. net.
- EASTERN EXCHANGE, CURRENCY AND FINANCE.** By the same Author. In demy 8vo, cloth, 375 pp., with 1 coloured and 6 black-and-white full-page plates. 10s. 6d. net.
- PRACTICAL BANKING.** By J. F. G. BAGSHAW, *Member of the Institute of Bankers.* With chapters on "The Principles of Currency," by C. F. HANNAFORD, *Associate of the Institute of Bankers,* and "Bank Book-keeping," by W. H. PEARD, *Member of the Institute of Bankers in Ireland.* In demy 8vo, cloth gilt, 400 pp., 5s. net.
- BANK ORGANISATION, MANAGEMENT, AND ACCOUNTS.** By J. F. DAVIS, D.Lit., M.A., LL.B. (Lond.), *Lecturer on Banking and Finance at the City of London College.* In demy 8vo, cloth gilt, 165 pp., 5s. net.
- BILLS, CHEQUES, AND NOTES.** A Handbook for Business Men and Lawyers. Together with the Bills of Exchange Act, 1882, and the Amending Act, Bills of Exchange (Crossed Cheques) Act, 1906. By J. A. SLATER, B.A., LL.B. (Lond.), *of the Middle Temple, and the North Eastern Circuit, Barrister-at-Law; author of "Mercantile Law," etc.* Second Edition, revised and enlarged. In demy 8vo, cloth gilt, 214 pp., 5s. net.
- DICTIONARY OF BANKING.** A Complete Encyclopaedia of Banking Law and Practice. By W. THOMSON, *Bank Inspector.* With a section on the Irish Land Laws in their relation to Banking. By LLOYD CHRISTIAN, *Secretary to the Institute of Bankers in Ireland.* In crown 4to, half-leather gilt, 618 pp., 21s. net.
- BANKERS' SECURITIES AGAINST ADVANCES.** By LAWRENCE A. FOGG, *Certificated Associate of the Institute of Bankers.* In demy 8vo, cloth gilt, 120 pp. 5s. net.
- THE EVOLUTION OF THE MONEY MARKET (1385-1915).** An Historical and Analytical Study of the Rise and Development of Finance as a Centralised, Co-ordinated Force. By ELLIS T. POWELL, LL.B. (Lond.), D.Sc. (Econ., Lond.); *of the Inner Temple, Barrister-at-Law.* In demy 8vo, cloth gilt, 748 pp. 10s. 6d. net.

SECRETARIAL WORK

- THE COMPANY SECRETARY'S VADE MECUM.** Edited by PHILIP TOVEY, F.C.I.S. Second Edition, enlarged and revised. In foolscap 8vo, cloth, 247 pp., 2s. net.
- SECRETARY'S HANDBOOK.** A Practical Guide to the Work and Duties in connection with the Position of Secretary to a Member of Parliament, a Country Gentleman with a landed estate, a Charitable Institution, with

a section devoted to the work of a Lady Secretary and a chapter dealing with Secretarial work in general. Edited by H. E. BLAIN. In demy 8vo, cloth gilt, 168 pp., 5s. net.

GUIDE FOR THE COMPANY SECRETARY. A Practical Manual and Work of Reference for the Company Secretary. By ARTHUR COLES, F.C.I.S. Second Edition, Enlarged and thoroughly Revised. In demy 8vo, cloth gilt, 432 pp., with 75 facsimile forms, and the full text of the Companies Acts, 1908 and 1913, and the Companies Clauses Act, 1845, 5s. net.

COMPANY ACCOUNTS. By the same Author. (See p. 1.)

DICTIONARY OF SECRETARIAL LAW AND PRACTICE. A Comprehensive Encyclopaedia of Information and Direction on all matters connected with the work of a Company Secretary. Fully illustrated with the necessary forms and documents. With Sections on special branches of Secretarial Work. Edited by PHILIP TOVEY, F.C.I.S. With contributions by nearly 40 eminent authorities on Company Law and Secretarial Practice, including: The Rt. Hon. G. N. Barnes, M.P.; F. Gore-Browne, K.C., M.A.; -A. Crew, F.C.I.S.; J. P. Earnshaw, F.C.I.S.; M. Webster Jenkinson, F.C.A.; F. W. Pixley, F.C.A. Second Edition, enlarged and revised. In one handsome volume, half leather gilt, gilt top, 940 pp., 35s. net.

THE TRANSFER OF STOCKS, SHARES, AND OTHER MARKETABLE SECURITIES. A Manual of the Law and Practice. By F. D. HEAD, B.A. (Oxon.), *Late Classical Exhibitioner of Queen's College, of Lincoln's Inn, Barrister-at-Law.* Second Edition, Revised and Enlarged. In demy 8vo, cloth gilt, 220 pp., 5s. net.

THE CHAIRMAN'S MANUAL. Being a guide to the management of meetings in general, and of meetings of local authorities, with separate and complete treatment of the meetings of public companies. By GURDON PALIN, of *Gray's Inn, Barrister-at-Law*, and ERNEST MARTIN, F.C.I.S. In crown 8vo, cloth gilt, 192 pp., 3s. 6d. net.

HOW TO TAKE MINUTES. A Guide for Secretaries and others to the correct method of taking and recording the Minutes of Meetings of Directors, Shareholders, etc., etc. Edited by ERNEST MARTIN, F.C.I.S., *Author of "Secretarial Work," etc.* In demy 8vo, cloth gilt, 130 pp., 2s. 6d. net.

WHAT IS THE VALUE OF A SHARE? Tables for readily and correctly ascertaining (1) the present value of shares; and (2) what dividends should be paid annually to justify the purchase or market price of shares. By D. W. ROSSITER, *Head of the Intelligence Department of the Consolidated Gold Fields of South Africa, Ltd.* In demy 8vo, limp cloth, 20 pp., 2s. 6d. net.

INCOME TAX

INCOME TAX AND SUPER-TAX PRACTICE. Including a Dictionary of Income Tax and Specimen Returns, showing the effects of recent enactments down to the Finance Act, 1917. By W. E. SNELLING, of the *Inland Revenue Department.* In demy 8vo, cloth gilt, 450 pp., 12s. 6d. net.

INCOME TAX TABLES, and Guide to the Deduction of Tax from Dividends, Interest, Ground Rents, etc. For the use of Secretaries, Accountants, Commercial Houses, and all Payers of Income Tax and Super-Tax. Compiled by W. E. SNELLING. In demy 8vo, cloth gilt, 185 pp., 5s. net.

INCOME TAX AND SUPER-TAX LAW AND CASES, including the Finance Act, 1917. A Practical Exposition of the Law, for the use of Income Tax Officials, Solicitors, Accountants, etc. With an Analysis of the Schedules, Guide to Income Tax Law, and Notes on Land Tax. Third Edition, Revised. By W. E. SNELLING. In demy 8vo, cloth gilt, 432 pp., 12s. 6d. net.

EXCESS PROFITS (Including Excess Mineral Rights) DUTY, and Levies under the Munitions of War Acts. Incorporating the Provisions of the Income Tax Acts made applicable by Statute and by Regulation, also the Regulations of the Commissioners of Inland Revenue, and of the Minister of Munitions. By W. E. SNELLING. Third Edition, Revised and Enlarged. In demy 8vo, cloth gilt, 262 pp. **10s. 6d.** net.

ECONOMICS

ECONOMIC GEOGRAPHY. By J. MCFARLANE, M.A., M.Com., *Lecturer in Geography in the University of Manchester.* In demy 8vo, cloth gilt, 568 pp., with 18 illustrations, **7s. 6d.** net.

OUTLINES OF THE ECONOMIC HISTORY OF ENGLAND. A Study in Social Development. By H. O. MEREDITH, M.A., M.Com., *Fellow of King's College, Cambridge; Professor of Economics, Queen's University, Belfast.* In demy 8vo, cloth gilt, 376 pp., **5s.** net.

THE HISTORY AND ECONOMICS OF TRANSPORT. By ADAM W. KIRKALDY, M.A., B.Litt., Oxford; M.Com., Birmingham; *Professor of Finance in the University of Birmingham;* and ALFRED DUDLEY EVANS, *Secretary of the Birmingham Exchange.* In demy 8vo, cloth gilt, 348 pp., **7s. 6d.** net.

THE ECONOMICS OF TELEGRAPHS AND TELEPHONES. By JOHN LEE, M.A., *Traffic Manager, Post Office Telegraphs.* In crown 8vo, cloth gilt, 92 pp., **2s. 6d.** net.

INDUSTRY AND FINANCE; WAR EXPEDIENTS AND RECONSTRUCTION. Being the Results of Inquiries arranged by the Section of Economic Science and Statistics of the British Association for the Advancement of Science, during the year 1917. Edited and with a Preface by ADAM W. KIRKALDY, M.A., B.Litt., Oxford; M.Com. Birm., and contributions by other eminent authorities. In demy 8vo, **4s. 6d.** net.

ADVERTISING AND SALESMANSHIP

THE CRAFT OF SILENT SALESMANSHIP. A Guide to Advertisement Construction. By C. MAXWELL TREGURTHA and J. W. FRINGS. Size. 6½ in. by 9¼ in., cloth, 98 pp., with illustrations. **3s. 6d.** net.

THE THEORY AND PRACTICE OF ADVERTISING. By WALTER DILL SCOTT, Ph.D. In large crown 8vo, cloth, with 61 illustrations, 240 pp., **6s.** net.

THE PSYCHOLOGY OF ADVERTISING. A Simple Exposition of the Principles of Psychology and their Relation to Successful Advertising. By the same Author. In large crown 8vo, cloth, with 67 illustrations, 282 pp., **6s.** net.

ADVERTISING AS A BUSINESS FORCE. A Compilation of Experience Records. By P. T. CHERINGTON, *Instructor in Commercial Organisation in the Graduate School of Business Administration, Harvard University.* In demy 8vo, cloth gilt, 586 pp., **7s. 6d.** net.

THE PRINCIPLES OF ADVERTISING ARRANGEMENT. By F. A. PARSONS, *President of the New York School of Fine and Applied Art.* Size 7 in. by 10¼ in., cloth, 128 pp., with many illustrations, **6s.** net.

THE NEW BUSINESS. A Handbook dealing with the Principles of Advertising, Selling, and Marketing. By HARRY TIPPER, *President, Advertising Men's League, New York; Lecturer on Advertising, New York University.* In demy 8vo, cloth gilt, 406 pp., **7s. 6d.** net.

SALESMANSHIP. By W. A. CORBION and G. E. GRIMSDALE. In crown 8vo, cloth, 186 pp., **2s. 6d.** net.

- PRACTICAL SALESMANSHIP.** A treatise on the Art of Selling Goods. By N. C. FOWLER, JR. Assisted by twenty-nine Expert Salesmen, Sales Managers, and prominent business men. In crown 8vo, cloth, 337 pp., 5s. net.
- COMMERCIAL TRAVELLING.** A Guide to the Profession for present and prospective salesmen "on the road." By ALBERT E. BULL. In crown 8vo, cloth gilt, 174 pp., 2s. 6d. net.

LAW

- MERCANTILE LAW.** By J. A. SLATER, B.A., LL.B. A practical exposition for Law Students, Business Men, and Advanced Classes in Commercial Colleges and Schools. Third Edition, Revised. In demy 8vo, cloth gilt, 464 pp., 5s. net.
- COMPANIES AND COMPANY LAW.** Together with the Companies (Consolidation) Act, 1908, and the Act of 1913. By A. C. CONNELL, LL.B. (Lond.), of the Middle Temple, Barrister-at-Law. Second Edition, Revised. In demy 8vo, cloth gilt, 348 pp., 5s. net.
- COMPANY CASE LAW.** By F. D. HEAD, B.A. (Oxon.), *Late Classical Exhibitioner of Queen's College; of Lincoln's Inn, Barrister-at-Law.* In demy 8vo, cloth gilt, 314 pp., 7s. 6d. net.
- THE LAW OF CARRIAGE.** By J. E. R. STEPHENS, B.A., of the Middle Temple, Barrister-at-Law. In demy 8vo, cloth gilt, 340 pp., 5s. net.
- THE LAW RELATING TO THE CARRIAGE BY LAND OF PASSENGERS, ANIMALS, AND GOODS.** By S. W. CLARKE, of the Middle Temple and the North Eastern Circuit, Barrister-at-Law. In demy 8vo, cloth gilt, 350 pp., 7s. 6d. net.
- INCOME TAX AND SUPER-TAX LAW AND CASES.** (See p. 5.)
- THE LAW RELATING TO SECRET COMMISSIONS AND BRIBES (CHRISTMAS BOXES, GRATUITIES, TIPS, ETC.); THE PREVENTION OF CORRUPTION ACT, 1906.** By ALBERT CREW, of Gray's Inn, and the South Eastern Circuit, Barrister-at-Law; *Lee Prizeman of Gray's Inn.* In demy 8vo, cloth gilt, 198 pp., 5s. net.
- BANKRUPTCY, DEEDS OF ARRANGEMENT, AND BILLS OF SALE.** By W. VALENTINE BALL, M.A., and G. MILLS, B.A., both of Lincoln's Inn, Barristers-at-Law. In demy 8vo, cloth gilt, 364 pp., 5s. net. Third Edition, Enlarged and Revised in accordance with the Bankruptcy Act, 1914, and the Deeds of Arrangement Act, 1914.
- PRINCIPLES OF MARINE LAW.** By LAWRENCE DUCKWORTH, of the Middle Temple, Barrister-at-Law. Third Edition, Revised. In demy 8vo, cloth gilt, about 400 pp., 7s. 6d. net.
- GUIDE TO THE LAW OF LICENSING.** The Handbook for all Licence-holders. By J. WELLS THATCHER, Barrister-at-Law. In demy 8vo, cloth gilt, 200 pp., 5s. net.
- RAILWAY (REBATES) CASE LAW.** By GEO. B. LISSENDEN. In demy 8vo, cloth gilt, 450 pp., 10s. 6d. net.
- THE LAW RELATING TO THE CHILD: Its Protection, Education, and Employment.** With Introduction on the Laws of Spain, Germany, France, and Italy; and Bibliography. By ROBERT W. HOLLAND, M.A., M.Sc., LL.D., of the Middle Temple, Barrister-at-Law. In demy 8vo, cloth gilt, 166 pp., 5s. net.
- GUIDE TO THE REGISTRATION OF BUSINESS NAMES ACT.** By KENNETH BROWN, Solicitor. In crown 8vo, paper boards, 1s. net.

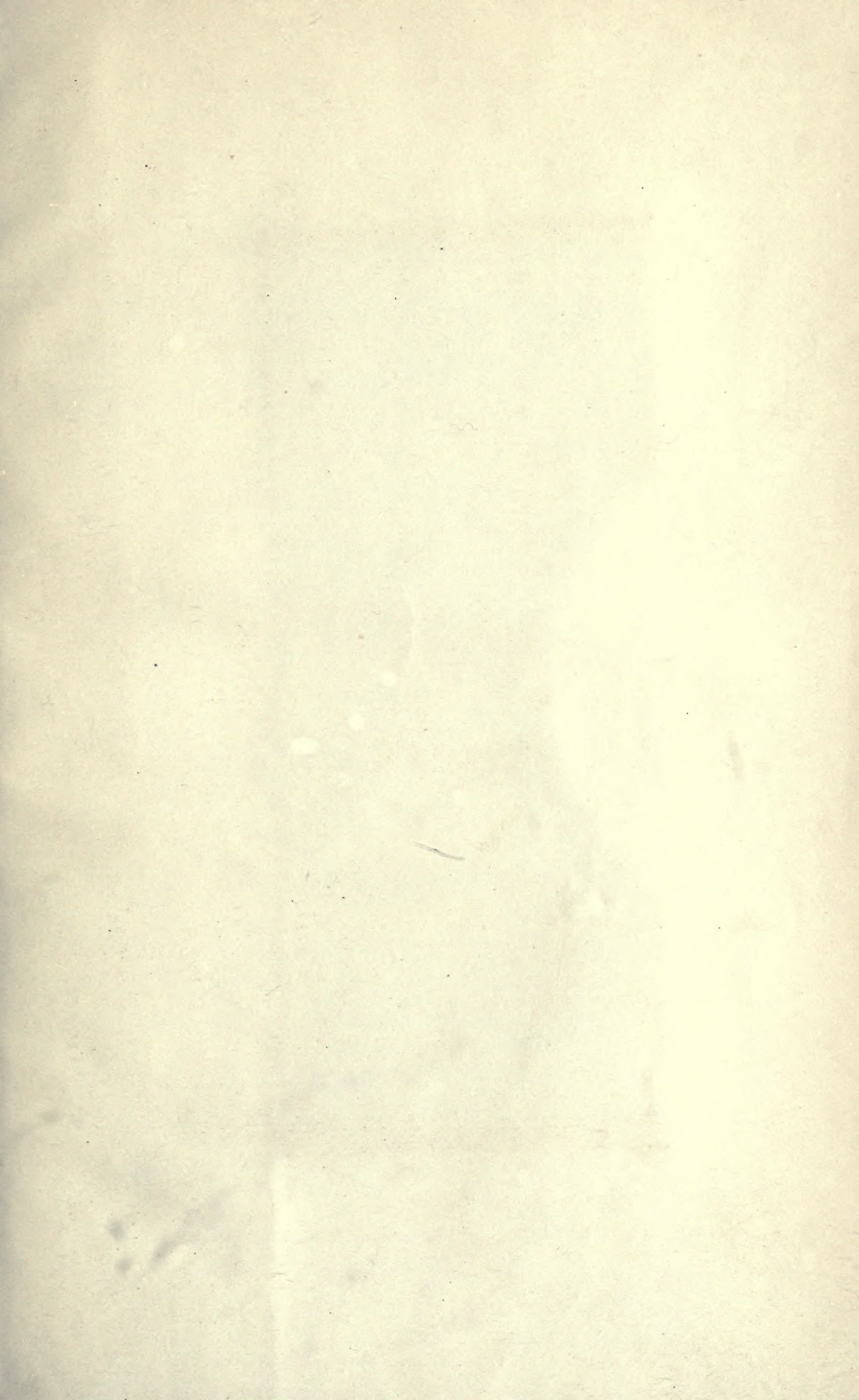
- HOUSEHOLD LAW.** By J. A. SLATER, B.A., LL.B. (Lond.). In demy 8vo, cloth gilt, 316 pp., 5s. net.
- THE LAW OF REPAIRS AND DILAPIDATIONS.** By T. CATO WORSFOLD, M.A., LL.D. In crown 8vo, cloth gilt, 104 pp., 3s. 6d. net.
- THE LAW OF EVIDENCE.** By W. NEMBHARD HIBBERT, LL.D. (Lond.), *Barrister-at-Law of the Middle Temple*. Second Edition Revised. In crown 8vo, cloth gilt, 144 pp., 5s. net.
- THE LAW OF PROCEDURE.** By the same Author. In demy 8vo, cloth gilt, 122 pp., 5s. net.
- BILLS, CHEQUES, AND NOTES.** (See page 4.)
- THE HISTORY, LAW, AND PRACTICE OF THE STOCK EXCHANGE.** (See page 3.)

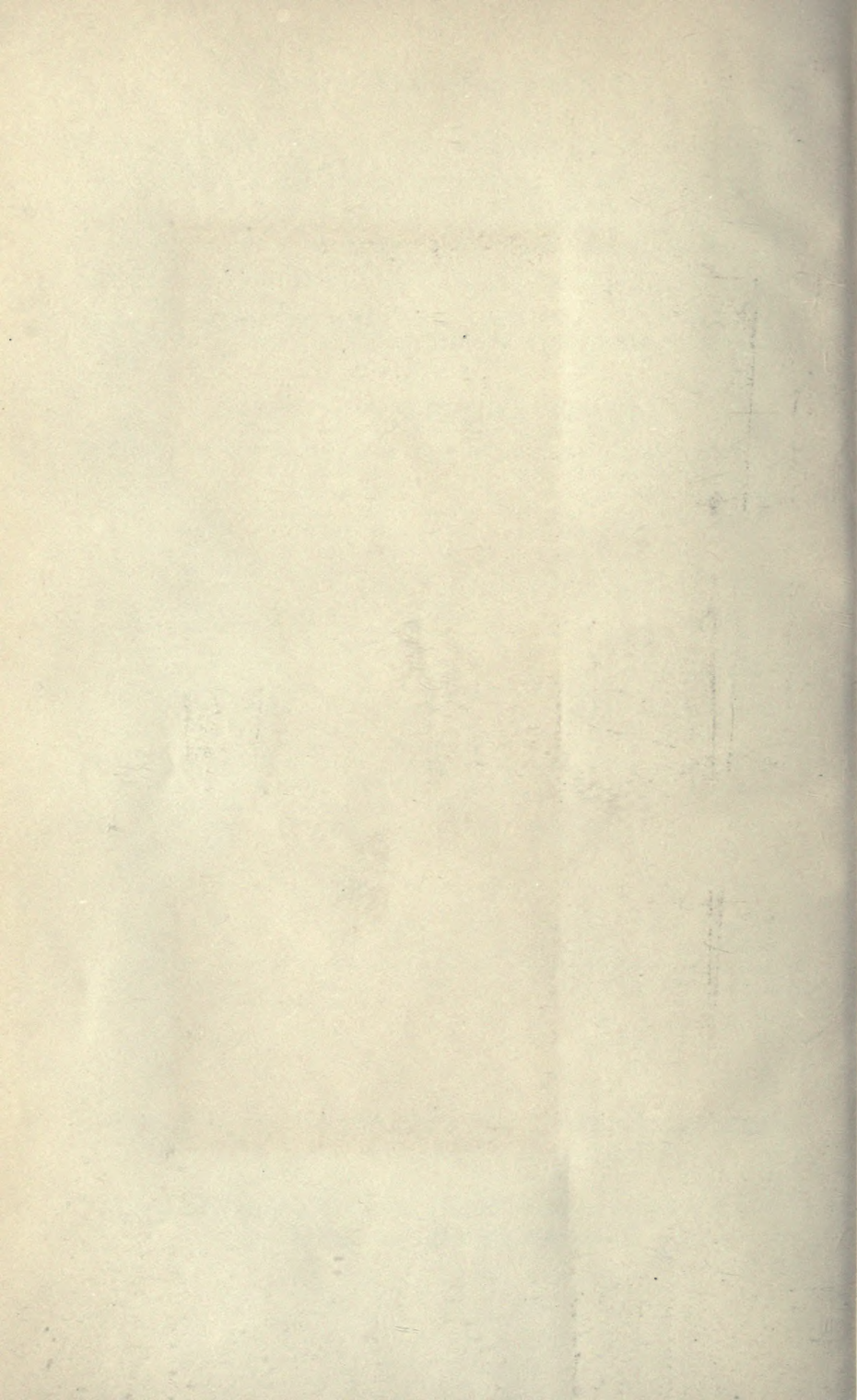
BUSINESS REFERENCE BOOKS

- COMMERCIAL ENCYCLOPAEDIA AND DICTIONARY OF BUSINESS.** A reliable and comprehensive work of reference on all commercial subjects, specially designed and written for the busy merchant, the commercial student, and the modern man of affairs. Edited by J. A. SLATER, B.A., LL.B. (Lond.), of the *Middle Temple and North-Eastern Circuit, Barrister-at-Law*. Assisted by upwards of 50 specialists as contributors. With numerous maps, illustrations, facsimile business forms and legal documents, diagrams, etc. In 4 vols., large crown 4to (each 450 pp.), cloth gilt, £1 10s. net. Half-leather gilt, £2 2s. net.
- BUSINESS MAN'S GUIDE.** Seventh Revised Edition. With French, German, Spanish and Italian equivalents for the Commercial Words and Terms. Edited by J. A. SLATER, B.A., LL.B. (Lond.). The work includes over 2,000 articles. In crown 8vo, cloth, 520 pp., 3s. 6d. net.
- PUBLIC MAN'S GUIDE.** A Handbook for all who take an interest in questions of the day. Edited by J. A. SLATER, B.A., LL.B. (Lond.). In crown 8vo, cloth gilt, 444 pp., 3s. 6d. net.
- DICTIONARY OF COMMERCIAL CORRESPONDENCE IN SEVEN LANGUAGES: ENGLISH, FRENCH, GERMAN, SPANISH, ITALIAN, PORTUGUESE AND RUSSIAN.** In demy 8vo, cloth, 502 pp., 7s. 6d. net.
- FILING SYSTEMS: Their Principles and their Application to Modern Office Requirements.** By EDWARD A. COPE. In crown 8vo, cloth gilt, 200 pp., with illustrations, 2s. 6d. net.
- A MANUAL OF DUPLICATING METHODS.** By W. DESBOROUGH. In demy 8vo, cloth, 90 pp., illustrated, 2s. net.
- COMMON COMMODITIES AND INDUSTRIES SERIES.** Each book in crown 8vo, cloth, 2s. net. Volumes already published on Tea, Coffee, Sugar, Oils, Wheat, Rubber, Iron and Steel, Copper, Coal, Timber, Cotton, Silk, Wool, Linen, Tobacco, Leather, Clays, Paper, Soap, Glass, Gums and Resins, The Motor Industry.

COMPLETE LIST POST FREE ON APPLICATION

Sir Isaac Pitman & Sons, Ltd., 1 Amen Corner, London, E.C. 4
And at Bath, New York and Melbourne





Ec.H

K591

Author Kirdaldy, Adam Willis (ed.)

Title Industry and finance...

University of Toronto
Library

DO NOT
REMOVE
THE
CARD
FROM
THIS
POCKET

Acme Library Card Pocket

Under Pat. "Ref. Index File"

Made by LIBRARY BUREAU

